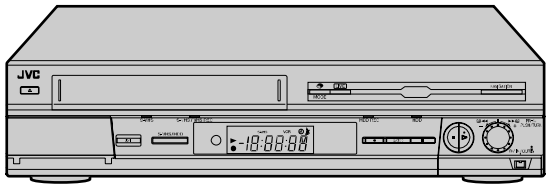
JVC

SERVICE MANUAL

HDD & S-VHS VIDEO RECORDER

HM-HDS4EK, HM-HDS4Ex



HDD S-VHS 625
SHOWVIEW® DELUXE
Super VHS ET
Hi-Fi

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

SPECIFICATIONS *(The specifications shown pertain specifically to the model HM-HDS4EX.)*

GENERAL

Power requirement : AC 220 V – 240 V∿, 50 Hz/60 Hz
Power consumption
  Power on : 42 W
  Power off : 12 W
Temperature
  Operating : 5°C to 40°C
  Storage : –20°C to 60°C
Operating position : Horizontal only
Dimensions (WxHxD)
  : 435 mm x 98 mm x 357 mm
Weight : 5.3 kg
Input/Output : 21-pin SCART connectors:
  IN/OUT x 1, IN/DECODER x 1
  RCA connectors:
  VIDEO IN x 1, AUDIO IN x 1,
  AUDIO OUT x 1
  S-Video connectors:
  IN x 1, OUT x 1
  DV connector:
  IN/OUT x 1 (4-pin.IEEE1394
  conformity, digital input/output)

HDD DECK VIDEO/AUDIO

Video format : MPEG2 (VBR)
Audio format : MPEG1 Layer2
Maximum recording time (approx.)
  (DV) : 6 hours
  (SP) : 20 hours
  (LP) : 28 hours
  (EP) : 56 hours
  (SEP) : 80 hours

VHS DECK VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR
  monochrome signal, 625 lines
  50 fields
Recording system : DA4 (Double Azimuth) head helical
  scan system
Format : S-VHS/VHS PAL standard
Signal-to-noise ratio: 45 dB
Horizontal resolution
  : 250 lines (VHS)
  400 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
  20 Hz to 20,000 Hz (Hi-Fi audio)
Maximum recording time
  (SP) : 240 min. with E-240 video cassette
  (LP) : 480 min. with E-240 video cassette

TUNER/TIMER

TV channel storage capacity
  : 99 positions (+AUX position)
Tuning system : Frequency synthesized tuner
Channel coverage : VHF 47 MHz – 89 MHz/
  104 MHz – 300 MHz/
  302 MHz – 470 MHz
  UHF 470 MHz – 862 MHz
Memory backup time
  : Approx. 10 min.

ACCESSORIES

Provided accessories
  : RF cable,
  21-pin SCART cable,
  Satellite Controller,
  Infrared remote control unit,
  "R6" battery x 2

Specifications shown are for SP mode (VHS) unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.

ATTENTION

This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the recorder off and unplug the mains power cord. Then plug it in again and turn the recorder on. Take out the cassette. After checking the cassette, operate the unit as usual.

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded ( ) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape 3) Spacers 5) Barrier
   2) PVC tubing 4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

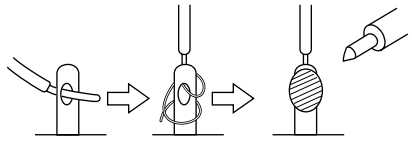


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

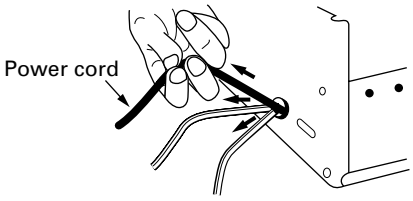


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

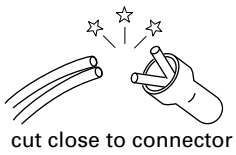


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

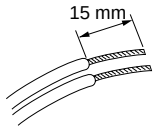


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

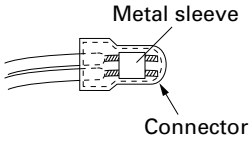


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

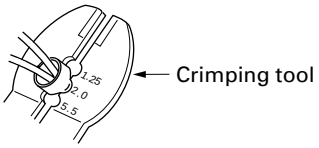


Fig.6

(5) Check the four points noted in Fig.7.

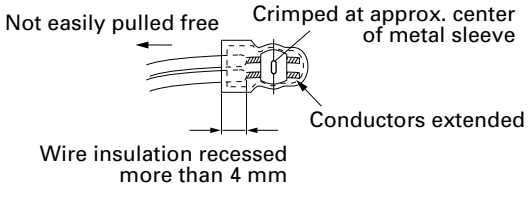

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

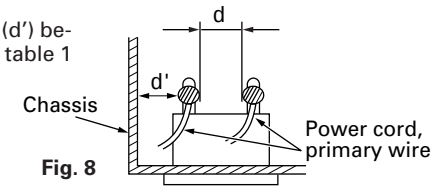


Fig. 8

4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

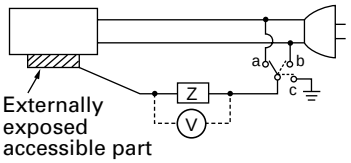


Fig. 9

5. Grounding (Class Ⅰ model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

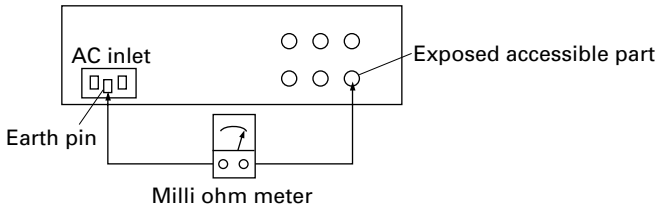


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 µF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Hard Disk Drive (HDD)

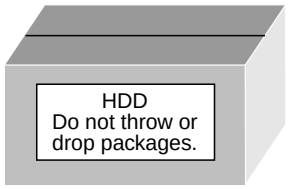
1. Hard Disk Drive (HDD) Handling Precautions

The HDD is a precision device for use in reading and writing a large amount of data on or from a disk rotating at a high speed. If it is not handled carefully, either abnormal operation may result or it may not be possible to read data. The HDD is sensitive to the following items and special care is required in safeguarding against them when handling an HDD. Also take care in handling a set incorporating an HDD.

1. Vibrations and impacts
2. Static electricity
3. Rough handling

1.1 Handling in transport, etc.

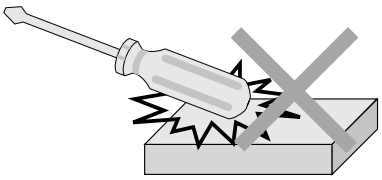
- Be sure to place the HDD in the manufacturer's specified package carton before transport.
- When receiving a package containing an HDD, check that the package carton is not damaged (such as having holes in the carton, crushed corners, etc.).
- Do not impact the packaging carton when loading or unloading it.
- It is not permitted to use the inner package carton only for transporting an HDD.
- Do not stack package cartons one upon another.



Be sure to package and transport the HDDs correctly.

1.2 Handling an HDD in the stand-alone status

- When handling an HDD on a hard workbench, place an antistatic mat (rubber sheet) or similar object on the hard surface (to prevent any impacts occurring between the HDD and bench).
- Do not stack the HDDs one upon another.
- Do not knock an HDD with a hard object (such as a screwdriver).
- Do not place an HDD on its side panel without using a support (do not place an HDD in an unstable position).



1.3 Handling the installation of an HDD

- Place antistatic mats or similar sheets on all of the surfaces on which work is conducted or when the HDD is transported.
- Do not permit the HDD to knock against the set's brackets.
- When screwing the brackets, be careful not to knock the HDD. When using a power screwdriver, use a low-shock model and arrange the tightening torque properly.
- When mounting an HDD in a HDD/VHS DUAL RECORDER, take care not to apply excessive force to the brackets.

SECTION 1
DISASSEMBLY

1.1 Before disassembling.

1.1.1 SYSTEM INFORMATION display

By transmitting the code "7F" from JIG RCU, SYSTEM INFORMATION can be seen. Mainly, SYSTEM INFORMATION is used for the version check. To exit SYSTEM INFORMATION, transmit the code "7F" from JIG RCU again.

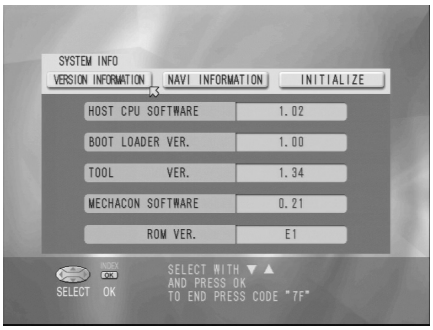


Fig. 1-1-1-1a SYSTEM INFORMATION DISPLAY

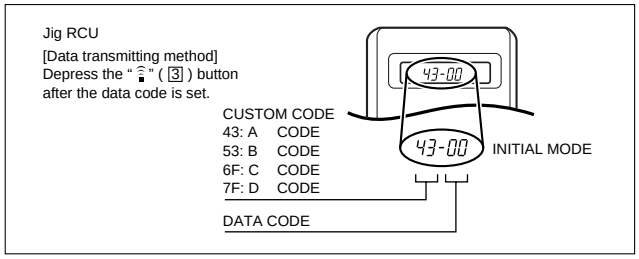


Fig. 1-1-1-1b Jig RCU [PTU94023B]

1.1.2 STANDALONE mode

When a HDD/VHS DUAL RECORDER AC cord is plugged into a power outlet, the boot loader is read from the IC8204 (8M FLASH ROM), which activates the HDD and reads the system files in the HDD before getting ready for operation. In consequence, the HDD/VHS DUAL RECORDER cannot be turned on if the HDD fails.
In case a failure of the HDD is in doubt, use the following procedure to switch the main power of the set ON using the VHS section alone, by bypassing the HDD operation check.

(1) With the HDD/VHS DUAL RECORDER in the remote control standby status, transmit code "AE" from the Jig RCU for more than 2 seconds.
When HDD/VHS DUAL RECORDER is STANDALONE mode, the symbol("↦") is flashing at the FDP.
(2) Transmit the code "AE" from Jig RCU again, then STANDALONE mode is cancelled.
(3) Turn off the power, and pull out the power cord from power outlet.

Note:

- ***When canceling STANDALONE mode, surely pull out the AC cord from power outlet once to reset the Host CPU.***

1.1.3 Jig RCU mode

This unit uses the following two modes for receiving remote control codes.

1) User RCU mode : Ordinary mode for use by the user.
2) Jig RCU mode : Mode for use in production and servicing.

When using the Jig RCU, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received). As both of the above two modes are stored in the EEPROM, it is required to set the VCR back to the User RCU mode each time that an adjustment is made or to check that the necessary operations have been completed. These modes can be set by the operations described below.

Note:

- ***Confirm the RCU mode when exchanged parts. Since some SERVICE PARTS sets the VCR to the Jig RCU mode as initial setting.***

1.1.3.1 Setting the Jig RCU mode

(1) Set the STANDALONE mode by transmitting the cord "AE" from the Jig RCU.
(2) Transmit the cord “MENU”, “2”, “8”, “OK” from the provided RCU.
When the VCR is set to the Jig RCU mode, the symbols (“ →| ”) is flashing at the FDP.

1.1.3.2 Setting the User RCU mode

(1) Turn off the power.
(2) Transmit the cord "80" from the Jig RCU.
(3) Cancel the STANDALONE mode by transmitting the cord "AE" from the Jig RCU again.
(4) Pull out the AC cord from the power outlet.

Note:

- ***Set the VCR to the STANDALONE mode before setting the VCR to the Jig RCU mode.***
- ***When canceling STANDALONE MODE, surely pull out the AC cord from power outlet once to reset the host CPU.***

1.1.3.3 Table of JIG RCU cord

Command	Cord	STANDALONE mode OFF	Jig RCU mode ON
SYSTEM INFORMATION DISPLAY ON/OFF	7F	usable	unusable
STANDALONE mode ON/OFF	AE	usable	usable
Jig RCU mode OFF	80	unusable	usable
EMERGENCY DISPLAY	59	unusable	usable
MECHANISM SERVICE MODE ON	E5	unusable	usable
EVR mode (VHS) ON/OFF	57	unusable	usable
EVR mode (HDD) ON/OFF	95	usable	unusable

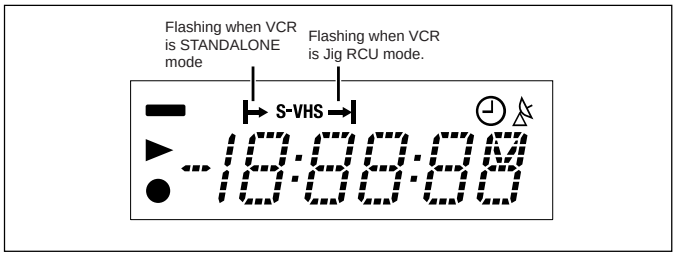


Fig. 1-1-3-3a STANDALONE mode / Jig RCU mode

1.1.4 Manually removing the cassette tape

If you cannot remove the cassette tape which is loaded because of any electrical or mechanical failures, manually remove it by taking the following steps.

(1) Unplug the power cord plug from the power outlet.
(2) Refer to the disassembly procedure of the VCR and perform the disassembly of the major parts before removing the mechanism assembly. (See Fig. 1-1-4a)

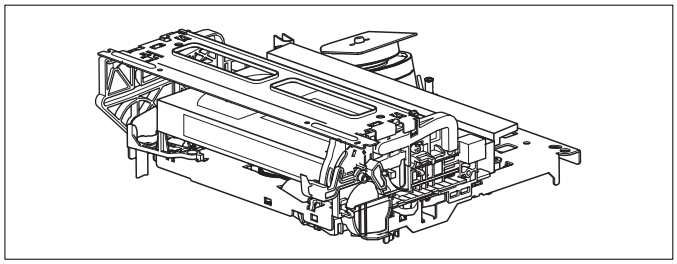


Fig. 1-1-4a

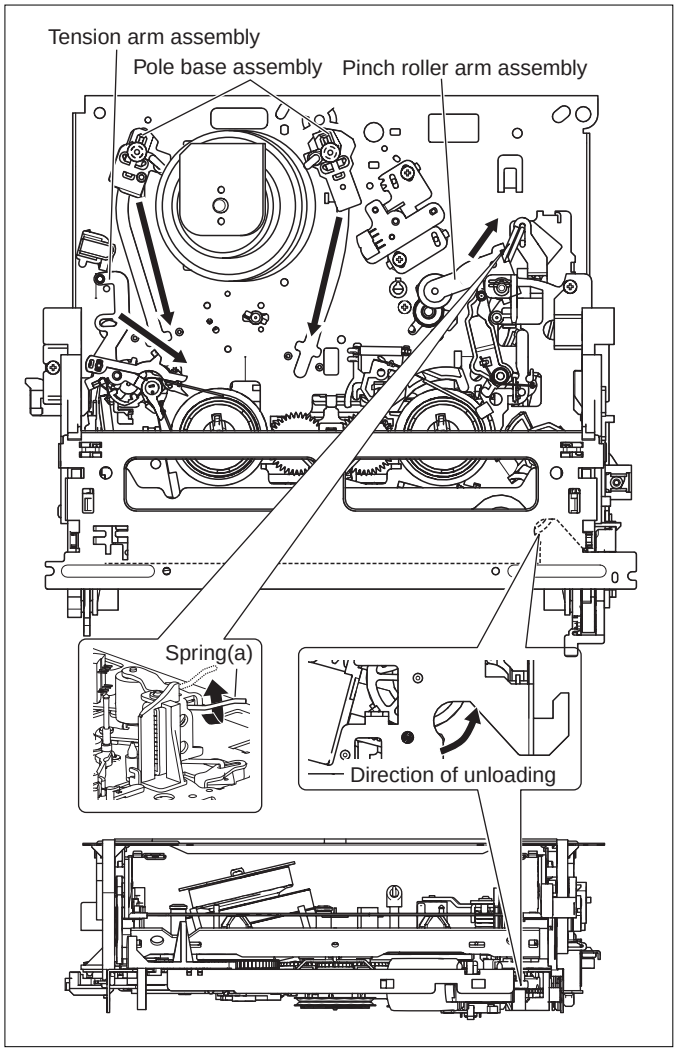


Fig. 1-1-4b

(3) Unload the pole base assembly by manually turning the gear of the loading motor until the pole base assembly is hidden behind the cassette lid. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig. 1-1-4b.) In case of mechanical failures, while keeping the tension arm assembly free from tension, pull out the tape on the pole base assembly. Take the spring(a) of the pinch roller arm assembly off the hook, and detach it from the tape.
(4) Remove the screw (a) of the side frame (L/R).
(5) Hold the slack tape and cassette cover together, lift the cassette tape, top frame, cassette holder and side frames (L, R) together from the rear and remove them by dis-engaging the hooks (a) and (b).

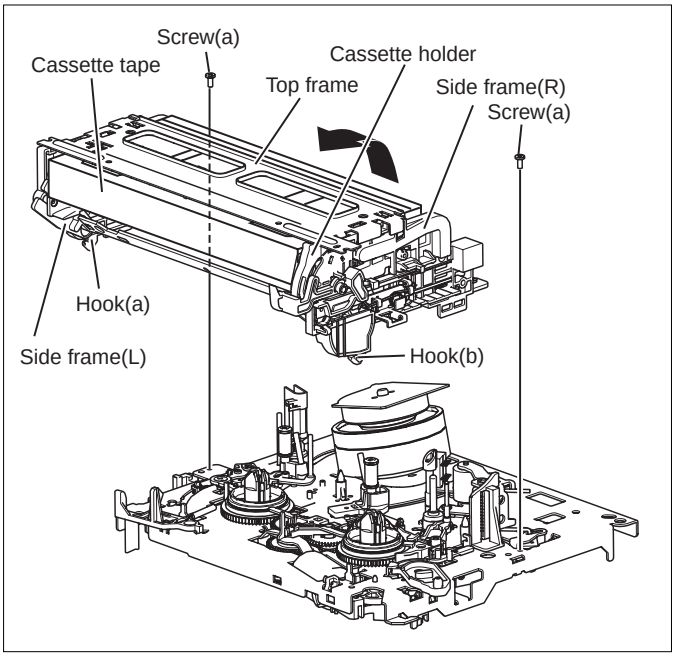


Fig. 1-1-4c

(6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

1.2 Removing the major parts

1.2.1 How to read the procedure table

This table shows the steps for disassembly of the externally furnished parts and board assemblies. Reverse these steps when re-assembling them.

<Example>

Step/ Loc No.	Part Name	Fig. No.	Point	Note
[1]	Top cover,	1-3a	4(S1a),(S1b),3(L1a), 2(SD1a),(P1a),(W1a), CN1(WR1a),	<Note 1a>
	Bracket		2(S1c)	

(1) (2) (3) (4) (5)

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

(2) Part name to be removed or installed.

(3) Fig. No. showing procedure or part location.

(4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P= Spring, W= Washer, S= Screw, L= Locking tab, SD= Solder, CN**(WR**)= Remove the wire (WR**) from the connector (CN**).

Note:

- ***The bracketed ( ) WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.***

(5) Adjustment information for installation

1.2.2 Disassembly procedure

Step/ Loc No.	Part Name	Fig. No.	Point	Note
[1]	TOP COVER	1-2-2d	2(S1a), 4(S1b)	
[2]	FRONT PANEL assembly	1-2-2a 1-2-2d	CN7003(WR2a), CN3011(WR2b), 2(L2a), (L2b), 5(L2c)	<Note 2a> <Note 2b>
	(S JACK board assemby)		2(S2b)	
	(LED/SW board assembly) (ADV.JOG board assembly)		5(S2c),3(S2d) KNOB assembly	
[3]	MECHANISM assembly	1-2-2d	CN2001(WR3a), 3(S3a), (S3b),	<Note 2a> <Note 3a>
	(DRUM assembly)	1-2-2b 1-2-2c	CN(WR3b), (S3x), (S3y), (S3z)	<Note 3b>
	(INERTIA PLATE)		4(L3a)	
	(ROLLER ARM assembly)		(L3b), (P3a)	
[4]	REAR PANEL	1-2-2d	CN5304(WR4a) 2(S4a),6(S4b) (L4a),3(L4b)	<Note 2a>
	(FAN MOTOR)		2(S4d)	
[5]	MAIN board assembly	1-2-2d	CN701(WR5a), CN7509(WR5b), CN7511(WR5c), 3(S5a)	<Note 2a>
	(TERMINAL board assembly)		CN901(WR5d) CN903 CN702 CN703 CN704 CN705 CN706	
[6]	HDD	1-2-2d	(WR6a),(WR6b), (S6a),4(S6b),4(S6c), (WR6c),(WR6d), SHIELD PLATE(WIND), BRACKET(HDD)x2	<Note 2a>
[7]	DIGITAL board assembly	1-2-2d	CN5305(WR7a), 2(S7a),2(S7b)	<Note 2a>
[8]	SW REG board assembly	1-2-2d	4(S8a)	

<Note 2a>
- Be careful not to damage the connector and wire etc. during connection and disconnection.
- When connecting the flat wire to the connector, be careful with the flat wire direction.

<Note 2b>
- When reattaching the Front panel assembly, make sure that the door opener of the Side frame (R) is lowered in position prior to the reinstallation.
- When reattaching the Front panel assembly, pay careful attention to the switch lever of the Front panel assembly not to make it touch the switch knob of the Main board assembly from the side.
- When reattaching the Front panel assembly, lift the Cassette door slightly.

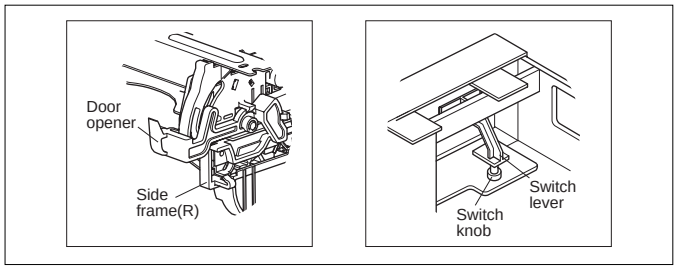


Fig. 1-2-2a

<Note 3a>
- When reattaching the Mechanism assembly, be sure to align the phase of the Rotary encoder on the Main board assembly.
- When reattaching the Mechanism assembly, set the “Mechanism assembling mode”. (See “section 2 mechanism”.)
- When reattaching the Mechanism assembly to the Main board assembly, take care not to damage the sensors and switch on the Main board assembly.

<Note 3c>
- When reattaching the Drum assembly, secure the screws (S3x to S3z) in the order of x, y, z.

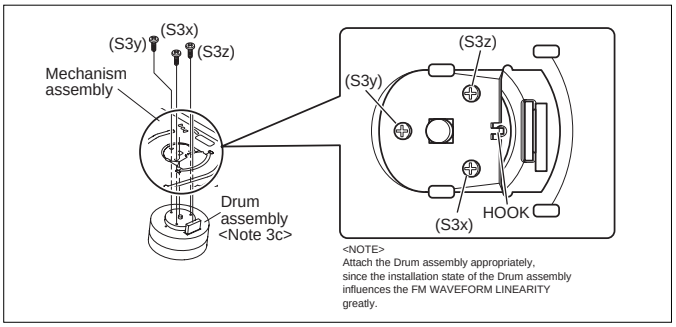


Fig. 1-2-2b

- When handling the drum assembly alone, hold it by the motor or shaft. Be careful not to touch other parts, especially the video heads. Also take care not to damage the connectors.

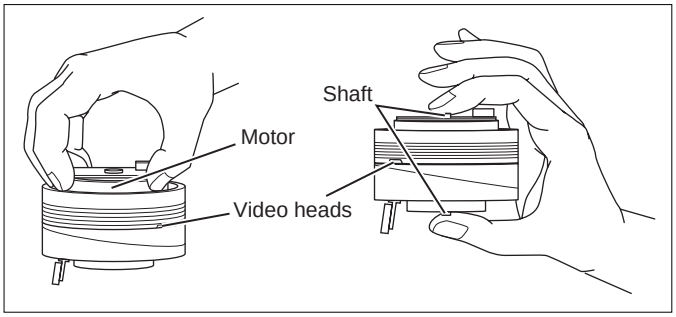
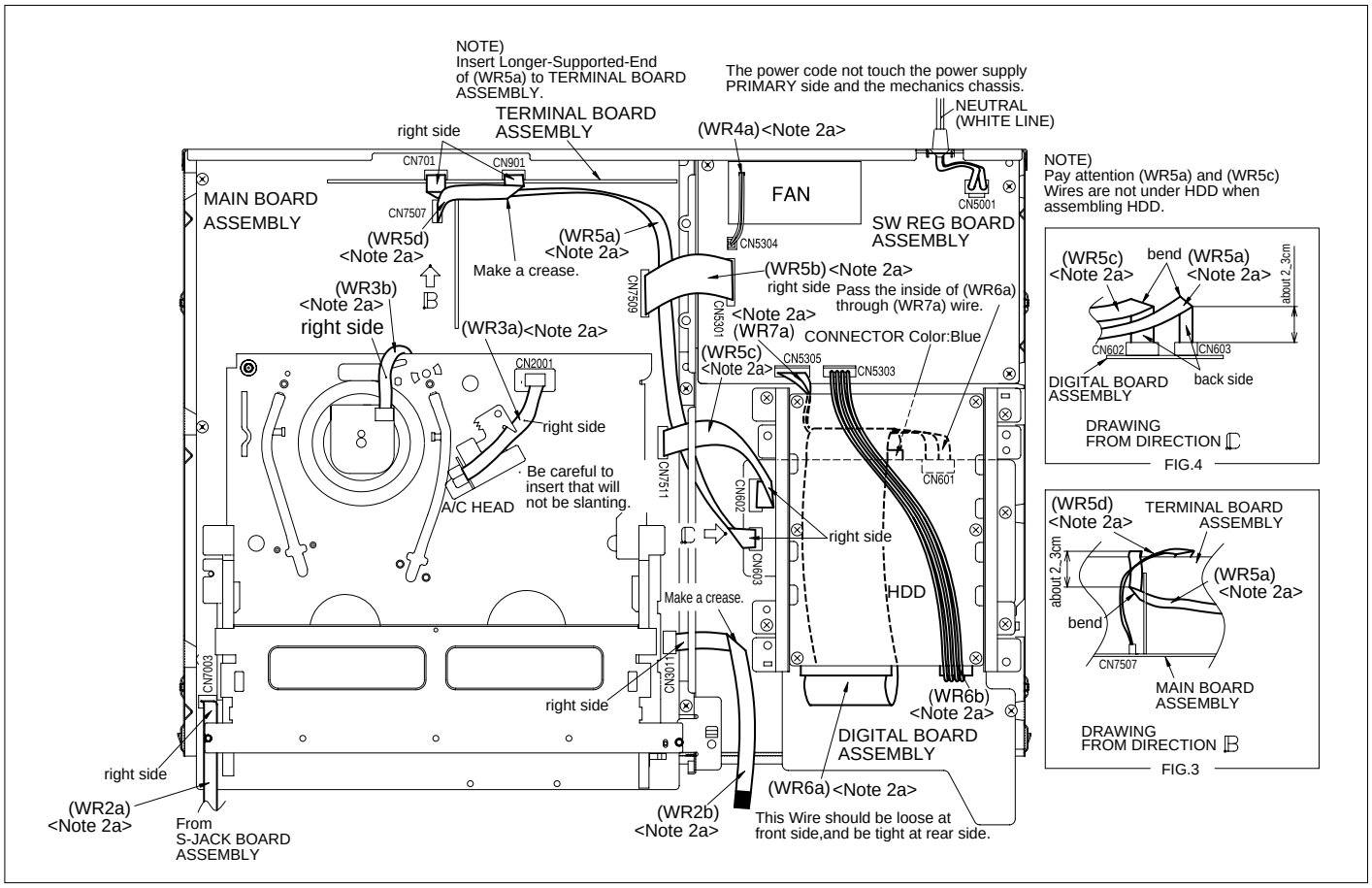


Fig. 1-2-2c



WIRING

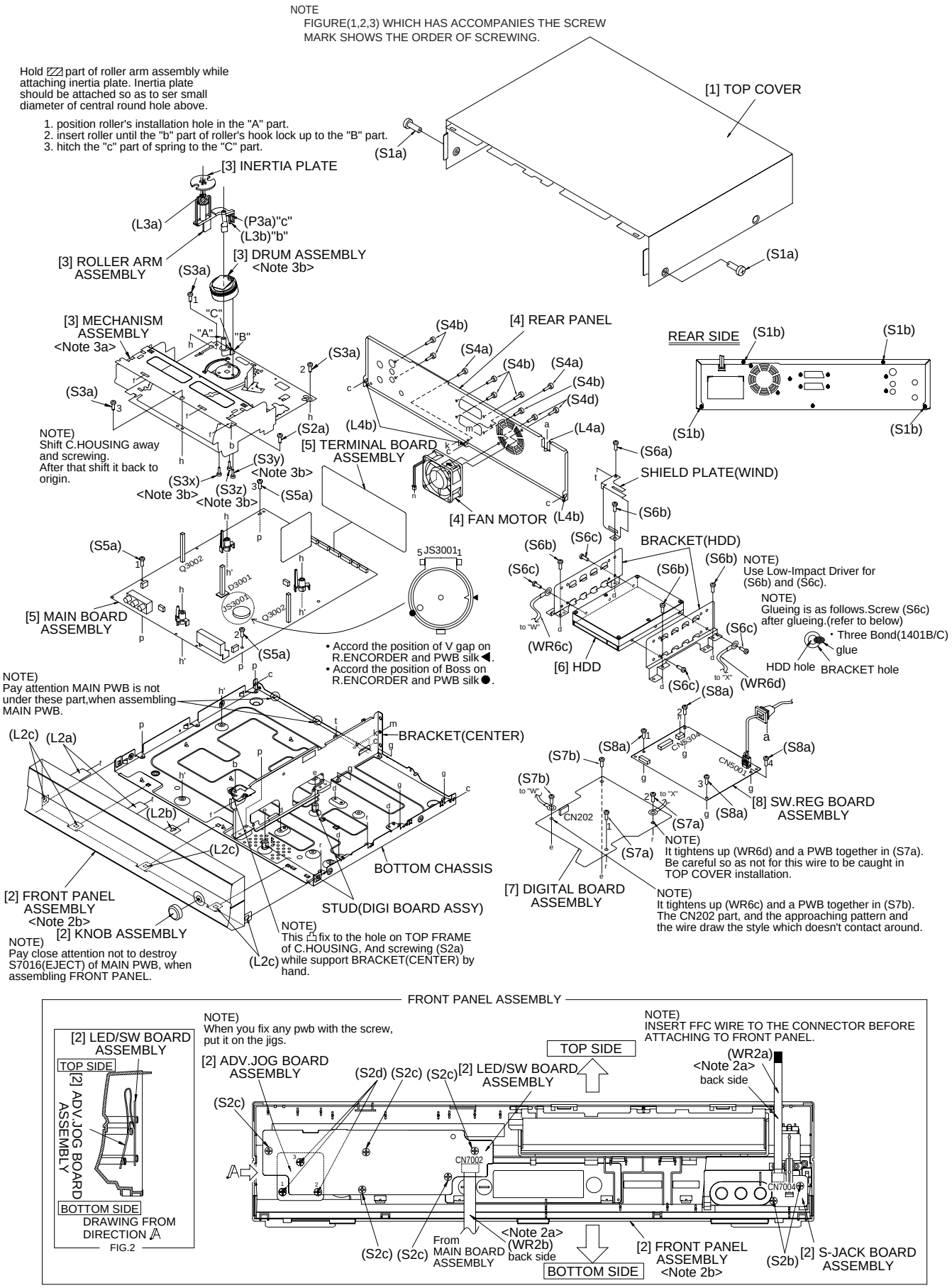

NOTE
FIGURE(1,2,3) WHICH HAS ACCOMPANIES THE SCREW MARK SHOWS THE ORDER OF SCREWING.
Hold ▨ part of roller arm assembly while attaching inertia plate. Inertia plate should be attached so as to ser small diameter of central round hole above.
1. position roller's installation hole in the "A" part.
2. insert roller until the "b" part of roller's hook lock up to the "B" part.
3. hitch the "c" part of spring to the "C" part.
[1] TOP COVER
(S1a)
[3] INERTIA PLATE
(L3a)
(P3a)"c"
(L3b)"b"
[3] ROLLER ARM ASSEMBLY
[3] DRUM ASSEMBLY <Note 3b>
(S3a)
[3] MECHANISM ASSEMBLY <Note 3a>
"A"
"B"
"C"
(S3a)
(S2a)
NOTE)
Shift C.HOUSING away and screwing.
After that shift it back to origin.
(S3y) <Note 3b>
(S3x) <Note 3b>
(S3z) <Note 3b>
(S5a)
[4] REAR PANEL
(S4b)
(S4a)
[5] TERMINAL BOARD ASSEMBLY
(L4b)
(L4a)
[4] FAN MOTOR
REAR SIDE
(S1b)
(S6a)
SHIELD PLATE(WIND)
(S6b)
BRACKET(HDD)
(S6c)
NOTE)
Use Low-Impact Driver for (S6b) and (S6c).
NOTE)
Glueing is as follows.Screw (S6c) after glueing.(refer to below)
• Three Bond(1401B/C)
glue
HDD hole
BRACKET hole
(WR6c)
[6] HDD
(WR6d)
[5] MAIN BOARD ASSEMBLY
JS3001
Q3002
D3001
• Accord the position of V gap on R.ENCORDER and PWB silk◀.
• Accord the position of Boss on R.ENCORDER and PWB silk●.
NOTE)
Pay attention MAIN PWB is not under these part,when assembling MAIN PWB.
BRACKET(CENTER)
(L2c)
(L2a)
(L2b)
BOTTOM CHASSIS
STUD(DIGI BOARD ASSY)
[2] FRONT PANEL ASSEMBLY <Note 2b>
[2] KNOB ASSEMBLY
NOTE)
Pay close attention not to destroy S7016(EJECT) of MAIN PWB, when assembling FRONT PANEL.
NOTE)
This ⏃ fix to the hole on TOP FRAME of C.HOUSING, And screwing (S2a) while support BRACKET(CENTER) by hand.
(S8a)
CN5304
CN5001
[8] SW.REG BOARD ASSEMBLY
(S7b)
(S7a)
CN202
[7] DIGITAL BOARD ASSEMBLY
NOTE)
It tightens up (WR6d) and a PWB together in (S7a). Be careful so as not for this wire to be caught in TOP COVER installation.
NOTE)
It tightens up (WR6c) and a PWB together in (S7b). The CN202 part, and the approaching pattern and the wire draw the style which doesn't contact around.
FRONT PANEL ASSEMBLY
[2] LED/SW BOARD ASSEMBLY
TOP SIDE
[2] ADV.JOG BOARD ASSEMBLY
BOTTOM SIDE
DRAWING FROM DIRECTION A
FIG.2
NOTE)
When you fix any pwb with the screw, put it on the jigs.
[2] ADV.JOG BOARD ASSEMBLY
(S2d) (S2c) (S2c)
[2] LED/SW BOARD ASSEMBLY
(S2c)
CN7002
CN7004
(WR2a)
<Note 2a>
back side
NOTE)
INSERT FFC WIRE TO THE CONNECTOR BEFORE ATTACHING TO FRONT PANEL.
TOP SIDE
A
(S2c) (S2c)
From MAIN BOARD ASSEMBLY
<Note 2a>
(WR2b)
back side
BOTTOM SIDE
[2] FRONT PANEL ASSEMBLY <Note 2b>
(S2b)
[2] S-JACK BOARD ASSEMBLY

Fig. 1-2-2d

1.3 Emergency display function

This unit saves details of the last two emergencies as the EMG history and allows the status of the VCR and the mechanism of each emergency to be shown both on the display and as OSD information.
When using the emergency function, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received).

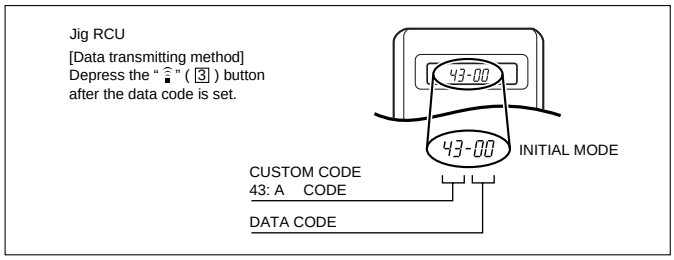


Fig. 1-3a Jig RCU [PTU94023B]

1.3.1 Displaying the EMG information

The EMG detail of information can be displayed by transmitting the code "59" from the Jig RCU.

Note:

- ***The EMG detail information <1><2> show the information on the latest EMG.***
  It becomes " – – : – – : – –" when there is no latest EMG record.

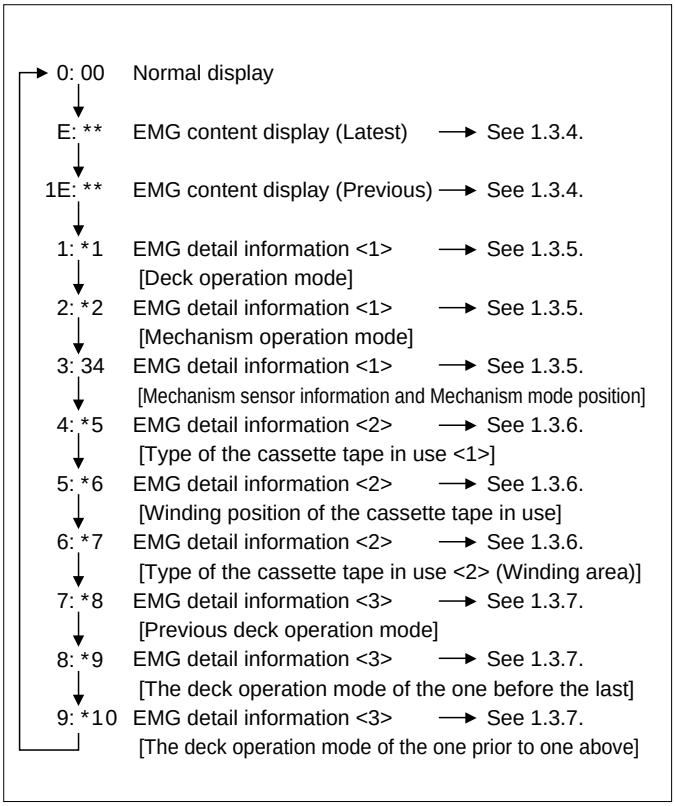

0: 00 Normal display
E: ** EMG content display (Latest) → See 1.3.4.
1E: ** EMG content display (Previous) → See 1.3.4.
1: *1 EMG detail information <1> → See 1.3.5.
[Deck operation mode]
2: *2 EMG detail information <1> → See 1.3.5.
[Mechanism operation mode]
3: 34 EMG detail information <1> → See 1.3.5.
[Mechanism sensor information and Mechanism mode position]
4: *5 EMG detail information <2> → See 1.3.6.
[Type of the cassette tape in use <1>]
5: *6 EMG detail information <2> → See 1.3.6.
[Winding position of the cassette tape in use]
6: *7 EMG detail information <2> → See 1.3.6.
[Type of the cassette tape in use <2> (Winding area)]
7: *8 EMG detail information <3> → See 1.3.7.
[Previous deck operation mode]
8: *9 EMG detail information <3> → See 1.3.7.
[The deck operation mode of the one before the last]
9: *10 EMG detail information <3> → See 1.3.7.
[The deck operation mode of the one prior to one above]

Fig. 1-3-1a EMG display of 7segment LED display model

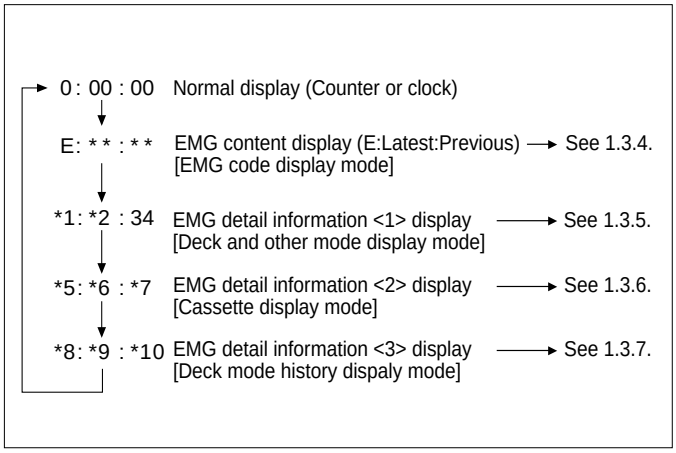

0 : 00 : 00 Normal display (Counter or clock)
E: * * : * * EMG content display (E:Latest:Previous) → See 1.3.4.
[EMG code display mode]
*1: *2 : 34 EMG detail information <1> display → See 1.3.5.
[Deck and other mode display mode]
*5: *6 : *7 EMG detail information <2> display → See 1.3.6.
[Cassette display mode]
*8: *9 : *10 EMG detail information <3> display → See 1.3.7.
[Deck mode history dispaly mode]

Fig. 1-3-1b EMG display of FDP display model

<Reference> EMG display of FDP display mode

(1) Transmit the code "59" from the Jig RCU.
The FDP shows the EMG content in the form of "E: * * : * * ".

<Example 1> E : 01 : 03
Previous EMG
Latest EMG

<Example 2> E : – – : – – ← No EMG record

(2) Transmit the code "59" from the Jig RCU again.
The FDP shows the EMG detail information <1> in the form of " * 1 : * 2 : 34 ".
- * 1 : Deck operation mode at the moment of EMG
- * 2 : Mechanism operation mode at the moment of EMG
- 3– : Mechanism sensor information at the moment of EMG
- –4 : Mechanism mode position at the moment of EMG

(3) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <2> in the form of " * 5 : * 6 : * 7 ".
- * 5 : Type of the cassette tape in use <1> .
- * 6 : Winding position of the cassette tape in use
- * 7 : Type of the cassette tape in use <2> (Winding area)

(4) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <3> in the form of "*8 : *9 : *10".
- * 8 : Previous deck operation mode at the moment of EMG
- * 9 : The deck operation mode of the one before the last at the moment of EMG
- * 10 : The deck operation mode of the one prior to one above at the moment of EMG

(5) Transmit the code "59" from the Jig RCU once again to reset the display.

1.3.2 Clearing the EMG history

(1) Display the EMG history.
(2) Transmit the code "36" from the Jig RCU.
(3) Reset the EMG display.

1.3.3 Details of the OSD display in the EMG display mode

During the EMG display, the OSD shows the data on the deck mode, etc. The details of the display contents are as follows.

Notes:

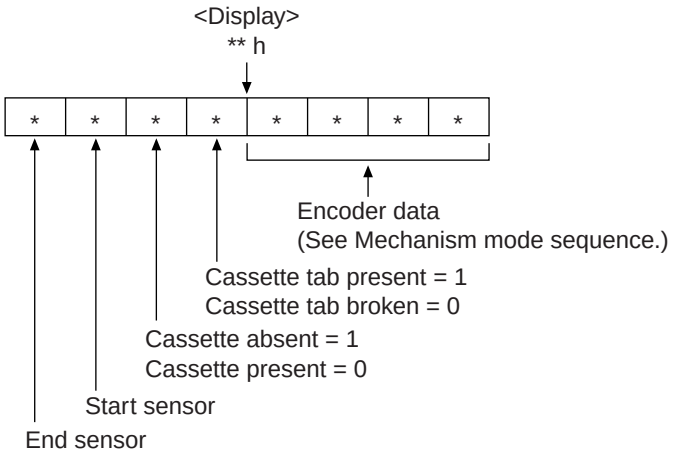
- ***The display is variable depending on the part No. of the System Control microcomputer (IC3001) built into the VCR. In the following, refer to the figure carrying the same two characters as the top two characters of the part number of your IC.***
- ***The sensor information in the OSD display contents is partially different from the mechanism sensor information in EMG detail information <1>.***

[For MN* only]

AA	BB	CC	DD	EE
FF	GG	HH	I I	J J
KK	L L	MM	NN	OO
PP	QQ	RR	SS	TT
UU	VV	WW	XX	YY

A A : Deck operation mode (See EMG detail information <1>.)
B B : Mechanism operation mode (See EMG detail of information <1>.)
C C : Mechanism transition flag
D D : Capstan motor control status
E E : Loading motor control status
F F : Sensor information (See sensor information details.)
GG : Capstan motor speed
HH : Key code (JVC code)
I I : Supply reel winding diameter data, higher 8 bits.
J J : Supply reel winding diameter data, lower 8 bits.
KK : Mechanism sensor information & mechanism mode position (See EMG detail of information <1>.)
L L : Tape speed data, higher 8 bits.
MM : Tape speed data, lower 8 bits.
N N : Cassette tape type <2>, higher 8 bits. (See EMG detail of information <2>.)
O O : Cassette tape type <2>, lower 8 bits. (See EMG detail of information <2>.)
P P : General data display area
| |
Y Y : General data display area

***FF: Sensor information details**

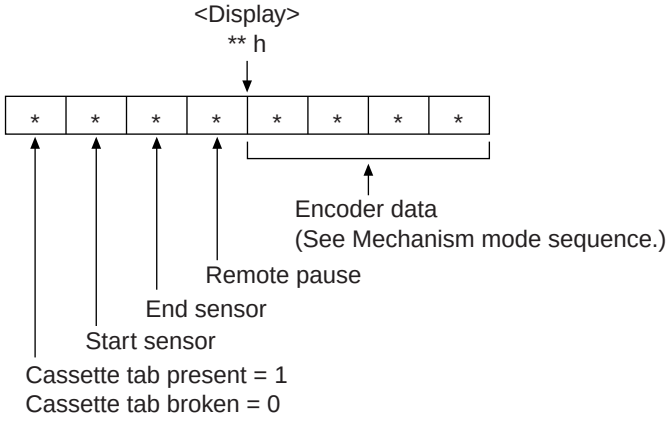


[For *HD only]

AA	BB	CC
DD	EE	FF
GGGG	HHHH	
I I	J J J J	
KKKK	L L L L	MMMM
ROM No.		

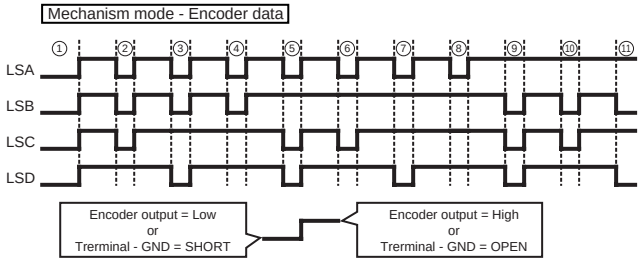
A A : Key code (JVC code)
B B : Deck operation mode (See EMG detail information <1>.)
C C : Mechanism operation mode (See EMG detail information <1>.)
D D : Sensor information (See sensor information details.)
E E : Capstan motor speed (Search, double speed)
F F : Tracking value
G G G G : Cassette tape type <2>, 16 bits. (See EMG detail information <2>.)
H H H H : Supply reel winding diameter data
I I : Capstan motor speed (FF/REW, double speed)
J J J J : Tape speed data, lower 8 bits.
K K K K : General data display area
L L L L : General data display area
MMMM : General data display area

***DD: Sensor information details**

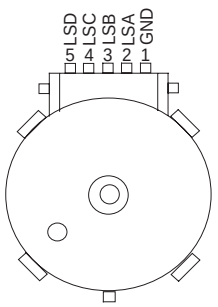


[For both MN*/HD*]

Mechanism mode sequence



No.	Position	Encoder data
①	EJECT	0 h = 0000
②	EJECT1	1 h = 0001
③	EJECT2	2 h = 0010
④	ULSTOP	3 h = 0011
⑤	UPPER	4 h = 0100
⑥	ONSTOP(PLAY)	5 h = 0101
⑦	FWD/SS	6 h = 0110
⑧	REV/SS	7 h = 0111
⑨	OFFSTOP	8 h = 1000
⑩	FFREW-BRAKE	9 h = 1001
⑪	FFREW	A h = 1010
⑫	MIDDLE	F h = 1111



1.3.4 EMG content description

Note: ***EMG contents "E08/E09" are for the model with Dynamic Drum (DD).***

FDP	CONTENT	CAUSE
E01: Loading EMG	If the mechanism mode does not change to the next mode within 4 seconds after the loading motor starts rotating in the loading direction, while the mechanism is in the after-loading position (with the tape up against the pole base), [E:01] is identified and the power is switched OFF. However, if the tape loading is not completed within 4 seconds after the loading motor starts rotating in the loading direction, the tape is simply unloaded and ejected. No EMG data is recorded in this case.	1. The mechanism is locked in the middle of the mode transition during a tape loading operation. 2. The mechanism overruns during the tape loading operation because the SYSCON cannot recognize the mechanism mode normally. This problem is due to a cause such as a rotary encoder failure. 3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.)
E02: Unloading EMG	When the mechanism mode cannot be changed to another mode even when the loading motor has rotated for more than 4 seconds in the unloading direction, [E:02] is identified and the power is turned off.	1. The mechanism is locked in the middle of mode transition. 2. Without an eject signal being sent from the SYSCON, unloading is attempted (i.e. Ejection is attempted while the tape is still inside the mechanism.) because the SYSCON cannot recognize the mechanism mode normally. This is due to a cause such as a rotary encoder failure. (Mechanism position: UPPER) 3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.)
E03: Take Up Reel Pulse EMG	When the falling edje of the take-up reel pulse has not been generated for more than 4 seconds in the capstan rotating mode, [E:03] is identified, the pinch rollers are turned off and stopped, and the power is turned off. In this case, however, the mechanism should be in position after tape loading. Note that the reel EMG is not detected during Slow/Frame advance operations.	1. The take-up reel pulse is not generated in the FWD transport modes (PLAY/FWD SEARCH/FF, etc.) because; 1)The idler gear is not meshed with the take-up reel gear because the mechanism malfunctions for some reason. 2)The idler gear is meshed with the take-up reel gear, but incapable of winding due to too large mechanical load (abnormal tension); 3)The reel is rotating normally but an FG pulse is not generated due to the take-up reel sensor failure. 2. The supply reel pulse is not generated in the REV transport modes (REV SEARCH/REW, etc.) because; 1) The idler gear is not meshed with the supply reel gear because the mechanism malfunctions for some reason. 2) The idler gear is meshed with the supply reel gear, but incapable of winding due to too large a mechanical load (abnormal tension); 3) The reel rotates normally but the FG pulse is not generated due to a supply reel sensor failure. 3. Power(SW5V) is not supplied to the reel sensor on the tape winding side.
E04: Drum FG EMG	When the drum FG pulse has not been input for more than 3 seconds in the drum rotating mode, [E:04] is identified, the pinch rollers are turned off and stopped, and the power is turned off.	1. The drum could not start or the drum rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high; 2) The tape is damaged or a foreign object (grease, etc.) adheres to the tape. 2. The drum FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (hall device) of the drum is faulty. 3. The drum control voltage (DRUM CTL V) is not supplied to the MDA. 4. Power (M12V) is not supplied to the drum MDA.
E05: Cassette Eject EMG	If the cassette does not reach the eject position within about 0.7 seconds after the cassette housing has started the cassette ejection operation, [E:05] is identified, the drive direction is reversed to load the tape, the mode is switched to STOP mode with the pinch roller OFF, and the power is switched OFF. During the cassette insertion process, the drive direction is reversed and the cassette is ejected if the tape is not up against the pole base within about 3 seconds after the start of the cassette pulling-in operation. If the cassette does not reach the eject position within about 0.7 seconds after the drive mode reversal operation, [E:05] is identified and the power is switched OFF immediately.	1. The cassette cannot be ejected due to a failure in the drive mechanism of the housing. 2. When the housing load increases during ejection, the loading motor is stopped because of lack of headroom in its drive torque. Housing load increasing factors: Temperature environment (low temperature, etc.), mechanism wear or failure. 3. The sensor/switch for detecting the end of ejection are not functioning normally. 4. The loading motor drive voltage is lower than specified or power (M12V) is not supplied to the motor (MDA). 5. When the user attempted to eject a cassette, a foreign object (or perhaps the user's hand) was caught in the opening of the housing.
E06: Capstan FG EMG	When the capstan FG pulse has not been generated for more than 1 second in the capstan rotating mode, [E:06] is identified, the pinch rollers are turned off and stopped, and the power is turned off.However, the capstan EMG is not detected in SLOW/STILL modes. Note that, if the part number of the System Control IC begins with "MN" or "M3", the capstan EMG is not detected even during the FF/REW operation.	1. The capstan could not start or the capstan rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high (mechanical lock); 2) The tape is damaged or a foreign object (grease, etc.) is adhered to the tape (occurrence of tape entangling, etc.). 2. The capstan FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (MR device) of the capstans is faulty. 3. The capstan control voltage (CAPSTAN CTL V) is not supplied to the MDA. 4. Power (M12V, SW5V) are not supplied to the capstan MDA.
E07: SW Power Short-Circuit EMG	When short-circuiting of the SW power supply with GND has lasted for 0.5 second or more, [E:07] is identified, all the motors are stopped and the power is turned off.	1. The SW 5 V power supply circuit is shorted with GND. 2. The SW 12 V power supply circuit is shorted with GND.
E08: DD Initialized (Absolute Position Sensor) EMG	When DD tilting does not complete in 4 seconds, [E:08] is identified, the tilt motor is stopped and the power is turned off.	1. The absolute value sensor is defective. (The soldered parts have separated.) 2. The pull-up resistor at the absolute sensor output is defective. (The soldered parts have separated.) 3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the absolute value sensor. 4. The absolute value sensor data is not sent to the System Controller CPU.
E09: DD FG EMG	When the DD FG pulse is not generated within 2.5 seconds, [E:09] is identified, the tilt motor is stopped and the power is turned off.	1. The FG sensor is defective. (The soldered parts have separated.) 2. The pull-up resistor at the FG sensor output is defective. (The soldered parts have separated.) 3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the FG sensor. 4. The power (5V) to the sensor is not supplied. (Connection failure/soldering failure) 5. The FG pulse is not sent to the System Controller CPU. 6. The tilt motor is defective. (The soldered parts have separated.) 7. The drive power to the tilt motor is not supplied. (Connection failure/soldering failure) 8. The tilt motor drive MDA - IC is defective. 9. Auto-recovery of the DD tilting cannot take place due to overrun.
E0A: Supply Reel Pulse EMG	When the falling edge of the supply reel pulse has not been generated for more than 10 seconds in the capstan rotating mode, [E:0A] is identified and the cassette is ejected (but the power is not turned off). In this case, however, the mechanism should be in the position after tape loading (with the tape up against the pole base). Also note that the reel EMG is not detected during Slow/Frame advance operations.	1. The supply reel pulse is not generated in the FWD transport mode (PLAY/FWD SEARCH/FF, etc.) because; 1) PLAY/FWD or SEARCH/FF is started while the tape in the inserted cassette is cut in the middle; 2) A mechanical factor caused tape slack inside and outside the supply reel side of the cassette shell. In this case, the supply reel will not rotate until the tape slack is removed by the FWD transport, so the pulse is not generated until then; 3) The reel is rotating normally but the FG pulse is not generated due to a supply reel sensor failure. 2. The take-up reel pulse is not generated in the REV transport mode (REV SEARCH/REW, etc.). 1) REV SEARCH/REW is started when the tape in the inserted cassette has been cut in the middle; 2) A mechanical factor caused tape slack inside and outside the take-up reel side of the cassette shell. In this case, the take-up reel will not rotate until the tape slack is removed by the REV transport, so the pulse will not be generated until that time; 3) The reel is rotating normally but the FG pulse is not generated due to a take-up reel sensor failure. 3. The power (SW 5V) to a reel sensor is not supplied.
EU1: Head clog warning history	Presupposing the presence of the control pulse output in the PLAY mode, when the value obtained by mixing the two V.FM output channels (without regard to the A.FM output) has remained below a certain threshold level for more than 10 seconds, [E:U1] is identified and recorded in the emergency history. During the period in which the head clog is detected, the FDP shows "U:01" and the OSD repeats the "3 seconds of warning display" and the "7 seconds of noise picture display" alternately. EMG code : "E:C1" or "E:U1" / FDP : "U:01" / OSD : "Try cleaning tape." or "Use cleaning cassette." The head clog warning is reset when the above-mentioned threshold has been exceeded for more than 2 seconds or the mode is changed to another mode than PLAY.	

Table 1-3-4a

1.3.5 EMG detail information <1>

The status (electrical operation mode) of the VCR and the status (mechanism operation mode/sensor information) of the mechanism in the latest EMG can be confirmed based on the figure in EMG detail information <1> .

[FDP/OSD display]

*1 : *2 : 34

*1 : Deck operation mode at the moment of EMG
*2 : Mechanism operation mode at the moment of EMG
3– : Mechanism sensor information at the moment of EMG
–4 : Mechanism mode position at the moment of EMG

Note:

- ***For EMG detailed information <1>, the content of the code that is shown on the display (or OSD) differs depending on the parts number of the system control microprocessor (IC3001) of the VCR. The system control microprocessor parts number starts with two letters, refer these to the corresponding table.***

***1 : Deck operation mode**
[Common table of MN* and HD]

Display		Deck operation mode
MN*	HD*	
00	-	Mechanism being initialized
01	00	STOP with pinch roller pressure off (or tape present with P.OFF)
02	01	STOP with pinch roller pressure on
03	-	POWER OFF as a result of EMG
04	04	PLAY (Normal playback)
0C	0E	REC
10	11	Cassette ejected
20	22	FF
21	-	Tape fully loaded, START sensor ON, short FF
22	-	Cassette identification FWD SEARCH before transition to FF (SP x7-speed)
24	26	FWD SEARCH (variable speed) including x2-speed
2C	2E	INSERT REC
40	43	REW
42	-	Cassette identification REV SEARCH before transition to REW (SP x7-speed)
44	47	REV SEARCH (variable speed)
4C	4C	AUDIO DUB
6C	6E	INSERT REC (VIDEO + AUDIO)
84	84	FWD STILL / SLOW
85	85	REV STILL / SLOW
8C	8F	REC PAUSE
8D	-	Back spacing
8E	-	Forward spacing (FWD transport mode with BEST function)
AC	AF	INSERT REC PAUSE
AD	-	INSERT REC back spacing
CC	CD	AUDIO DUB PAUSE
CD	-	AUDIO DUB back spacing
EC	EF	INSERT REC (VIDEO + AUDIO) PAUSE
ED	-	INSERT REC (VIDEO + AUDIO) back spacing

***2 : Mechanism operation mode**
[Table of MN*]

Display	Mechanism operation mode
00	Command standby (No command to be executed)
01	Immediate Power OFF after EMG occurrence
02	Loading from an intermediate position during mechanism initialization
03	Unloading due to EMG occurrence during mechanism initialization
04	Ejecting cassette (ULSTOP to EJECT)
05	Inserting cassette (EJECT to ULSTOP)
06	Loading tape (ULSTOP to PLAY)
07	Unloading tape (PLAY to ULSTOP)
08	Transition from pinch roller ON to STOP
09	Transition from pinch roller OFF to STOP (PLAY to OFFSTOP)
0A	Transition from pinch roller OFF to STOP at power OFF
0B	Transition from pinch roller ON to STOP at power ON
0C	Transition to PLAY
0D	Transition to Search FF
0E	Transition to REC
0F	Transition to FWD STILL/SLOW
10	Transition to REV STILL/SLOW
11	Transition to Search REV
12	Transition from FF/REW to STOP
13	Transition to FF
14	Transition to REW
15	Tape end detection processing during loading
16	Short FWD/REV at tape sensor ON during unloading
17	Transition to FF/REW brake mode

[Table of HD*]

Display	Mechanism operation mode
00	STOP with pinch roller pressure off
01	STOP with pinch roller pressure on
02	U/L STOP (or tape being loaded)
04	PLAY (Normal playback)
05	PLAY (x1-speed playback using JOG)
0E	REC
11	Cassette ejected
22	FF
26	FWD SEARCH (variable speed) including x2-speed
2E	INSERT REC
43	REW
47	REV SEARCH
4C	AUDIO DUB
6E	INSERT REC (VIDEO + AUDIO)
84	FWD STILL/SLOW
85	REV STILL/SLOW
8F	REC PAUSE
AF	INSERT REC PAUSE
C7	REV SEARCH (x1-speed reverse playback using JOG)
CD	AUDIO DUB PAUSE
EF	INSERT REC (VIDEO + AUDIO) PAUSE
F0	Mechanism being initialized
F1	POWER OFF as a result of EMG
F2	Cassette being inserted
F3	Cassette being ejected
F4	Transition from STOP with pinch roller pressure on to STOP with pinch roller pressure off
F5	Transition from STOP with pinch roller pressure on to PLAY
F6	Transition from STOP with pinch roller pressure on to REC
F7	Cassette type detection SEARCH before FF/REW is being executed
F8	Tape being unloaded
F9	Transition from STOP with pinch roller pressure off to STOP with pinch roller pressure on
FA	Transition from STOP with pinch roller pressure off to FF/REW
FB	Transition from STOP with pinch roller pressure off to REC.P (T.REC,etc.)
FC	Transition from STOP with pinch roller pressure off to cassette type detection SEARCH
FD	Short REV being executed after END sensor on during unloading
FE	Tension loosening being executed after tape loading (STOP with pinch roller pressure on)
FF	Tape being unloaded

3– : Mechanism sensor information
[Common table of MN* and HD*]

Display	Mechanism sensor information			
	REC safety SW	Start sensor	End sensor	Mechansim position sensor
0-	Tab broken	ON	ON	ON
1-	Tab broken	ON	ON	OFF
2-	Tab broken	ON	OFF	ON
3-	Tab broken	ON	OFF	OFF
4-	Tab present	OFF	ON	ON
5-	Tab present	OFF	ON	OFF
6-	Tab present	OFF	OFF	ON
7-	Tab present	OFF	OFF	OFF
8-	Tab broken	ON	ON	ON
9-	Tab broken	ON	ON	OFF
A-	Tab broken	ON	OFF	ON
B-	Tab broken	ON	OFF	OFF
C-	Tab present	OFF	ON	ON
D-	Tab present	OFF	ON	OFF
E-	Tab present	OFF	OFF	ON
F-	Tab present	OFF	OFF	OFF

Tab broken = 0 Sensor ON = 0 Sensor ON = 0
Tab present = 1 sensor OFF = 1 Sensor OFF = 1

–4 : Mechanism mode position
[Common table of MN* and HD*]

Mechanism sensor information	Display	Deck operation mode	
Even number (0, 2, 4, 6, 8, A, C, E)	-0	Not established	
	-1	EJECT	EJECT position
	-2	EJECT-EJECT1	Intermodal position
	-3	EJECT1	EJECT1 position
	-4	EJECT1-EJECT2	Intermodal position
	-5	EJECT2	EJECT2 position
	-6	EJECT2-ULSTOP	Intermodal position
	-7	ULSTOP	ULSTOP position
	-8	ULSTOP-UPPER	Intermodal position
	-9	UPPER	Loading (unloading) tape
	-A	UPPER-ONSTOP	Intermodal position
	-B	ONSTOP	PLAY position
	-C	PLAY-FWD/SS	Intermodal position
	-D	FWD/SS	FWD (FWD Still/Slow) position
	-E	FWD/SS-REV	Intermodal position
	-F	REV	REV (REV Still/Slow) position
Odd number (1, 3, 5, 7, 9, B, D, F)	-0	REV-OFFSTOP	Intermodal position
	-1	OFFSTOP	Pinch roller OFF position
	-2	OFFSTOP-FFREWB	Intermodal position
	-3	FFREWB	FF/REW Brake position
	-4	FFREWB-FFREW	Intermodal position
	-5	FFREW	FF/REW position

1.3.6 EMG detail information <2>

The type of the cassette tape and the cassette tape winding position can be confirmed based on the figure in EMG detail information <2> .

[FDP/OSD display]

*5 :*6 :*7

*5 : Type of the cassette tape in use <1>
*6 : Winding position of the cassette tape in use
*7 : Type of the cassette tape in use <2> (Winding area)

Note:

- ***EMG detail information <2> is the reference information stored using the remaining tape detection function of the cassette tape. As a result, it may not identify cassette correctly when a special cassette tape is used or when the tape has variable thickness.***

***5 : Cassette tape type <1>**

Display	Cassette tape type <1>
00	Cassette type not identified
16	Large reel/small reel (T-0 to T-15/T-130 to T-210) not classified
82	Small reel, thick tape (T-120) identified/thin tape (T-140) identified
84	Large reel (T-0 to T-60) identified
92	Small reel, thick tape (T-130) identified/thin tape (T-160 to T-210) identified
93	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) not classified
C3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
D3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
E1	C cassette, thick tape (TC-10 to TC-20) identified
E2	Small reel, thick tape (T-0 to T-100) identified
E9	C cassette, thin tape (TC-30 to TC-40) identified
F1	C cassette, thick tape/thin tape (TC-10 to TC-40) not classified

Notes:

- ***Cassette tape type <1> is identified a few times during mode transition and the identification count is variable depending on the cassette tape type. If an EMG occurs in the middle of identification, the cassette tape type may not be able to be identified.***
- ***If other value than those listed in the above table is displayed, the cassette tape type is not identified.***

***6 : Cassette tape winding position**

The cassette tape winding position at the moment of EMG is displayed by dividing the entire tape (from the beginning to the end) in 21 sections using a hex number from “00” to “14”.

“00” : End of winding
“14” : Beginning of winding
“FF” : Tape position not identified

***7 : Cassette tape type <2> (Winding area)**

Display	Cassette tape type <2>		(Reference) Word data (Beginning) (End)
00	Cassette type not identified		
04 - 08	C cassette, thick tape	TC-10	(0497 - 0506) (0732 - 0858)
05 - 06	Small reel, thick tape	T-20	(05A9 - 0661)
05 - 0C	C cassette, thick tape	TC-20P	(0599 - 05FF) (0AA1 - 0C07)
06 - 0C	C cassette, thin tape	TC-40	(0623 - 063D) (0C41 - 0CC3)
06 - 0C	C cassette, thin tape	TC-30	(0611 - 0638) (0C0C - 0CB2)
07 - 08	Small reel, thick tape	T-40	(07CC - 08E5)
09 - 0B	Small reel, thick tape	T-60	(09FD - 0B78)
0C - 0D	Small reel, thick tape	T-80(DF-160)	(0C20 - 0DFC)
0D - 0F	Small reel, thick tape	T-90(DF-180)	(0D31 - 0F3E)
0E - 10	Small reel, thick tape	T-100	(0E43 - 107F)
10 - 12	Small reel, thin tape	T-140	(10E1 - 120C)
10 - 13	Small reel, thick tape	T-120(DF-240)	(1073 - 1313)
11 - 14	Small reel, thick tape	T-130	(1185 - 1429)
12 - 14	Small reel, thin tape	T-160	(12D3 - 141F)
13 - 14	Small reel, thin tape	T-210(DF-420)	(1373 - 14C3)
13 - 14	Small reel, thin tape	T-180(DF-360)	(1357 - 14C0)
13 - 14	Small reel, thin tape	T-168	(1395 - 14EE)
13 - 14	Small reel, thick tape	DF-300	(13A8 - 14CE)
15 - 16	Large reel	T-20	(1536 - 1618)
16 - 17	Large reel	T-30	(1647 - 175A)
17 - 18	Large reel	T-40	(1759 - 189C)
19 - 1B	Large reel	T-60	(1989 - 1B2F)

Note:

- ***The values of cassette tape type <2> in the above table are typical values with representative cassette tapes.***

1.3.7 EMG detail information <3>

Three deck operation modes preceding the deck operation mode in which the EMG occurs may be confirmed based on the figures in the EMG information detail <3>. For the contents of the displayed information, see the table "Deck operation mode" in section "1.3.5 EMG detail information <1>".

1.4 Service position

This unit has been designed so that the Mechanism and Main board assemblies can be removed together from the chassis assembly. Before diagnosing or servicing the circuit boards, take out the major parts from the chassis assembly.

1.4.1 How to set the “Service position”

(1) Refer to the disassembly procedure and perform the disassembly of the major parts before removing the Mechanism assembly.
(2) Remove the screws that fix the Mechanism assembly to the Chassis assembly. If any other screws are used to fix the boards, remove them also.
(3) Remove the combined Mechanism and Main board assemblies.
(4) If any other major parts are used, remove them also.
(5) Connect the wires and connectors of the major parts that have been removed in steps (1) to (4). (Refer to Fig. 1-2-2d.)
(6) Place the combined Mechanism, Main board and other board assemblies upside down.
(7) Insert the power cord plug into the power outlet and then proceed with the diagnostics and servicing of the board assembly.

Notes:

- ***Before inserting the power cord plug into the power outlet, make sure that none of the electrical parts are able to short-circuit between the workbench and the board assembly.***
- ***For the disassembly procedure of the major parts and details of the precautions to be taken, see “1.2 Removing the major parts”.***
- ***If there are wire connections from the Main board and Mechanism assemblies to the other major parts, be sure to remove them (including wires connected to the major parts) first before performing step (2).***
- ***When carrying out diagnosis and repair of the Main board assembly in the “Service position”, be sure to ground both the Main board and Mechanism assemblies. If they are improperly grounded, there may be noise on the playback picture or FDP counter display may move even when the mechanism is kept in an inoperative status.***
- ***In order to diagnose the playback or recording of the cassette tape, set the Mechanism assembly to the required mode before placing it upside down. If the mechanism mode is changed (including ejection) while it is in an upside down position the tape inside may be damaged.***
- ***For some models, the mechanism and board assemblies are attached by connectors only. When carrying out a diagnosis or repair of the boards in the “Service position”, make sure that the connectors are not disconnected.***

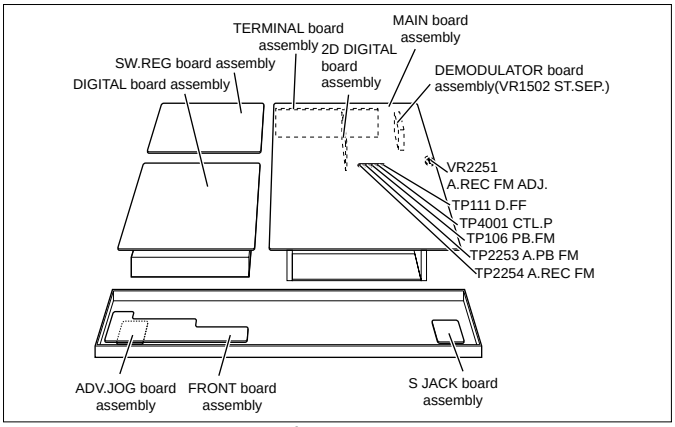


Fig. 1-4-1a

1.5 Mechanism service mode

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the “Mechanism service mode”.

1.5.1 How to set the “Mechanism service mode”

(1) Set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received).
(2) Transmit the code “E5” from the Jig RCU.
(3) Release the lug of the Cassette holder and then slide the Cassette holder toward the direction where the Cassette holder is loaded by manually.
(4) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.
When the VCR is set to the Mechanism service mode, the symbols (“Timer”) in the FDP (LED) are blinked.

1.5.2 How to exit from the "Mechanism service mode"

(1) Unplug the power cord plug from the power outlet.

1.6 Maintenance and inspection

1.6.1 Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.
When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

Note:

- ***Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.***

(1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.
(2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.
(3) After cleaning, make sure that the cleaned parts are completely dry before using the cassette tape.

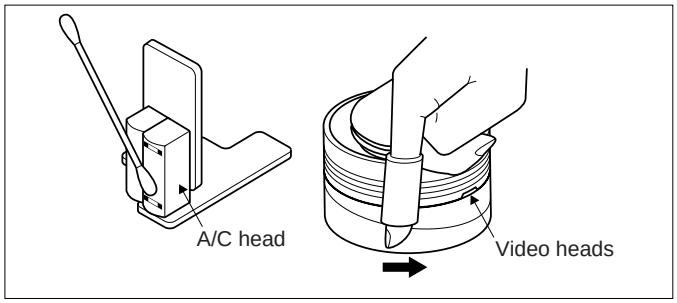


Fig. 1-7-1a

1.6.2 Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

Note:

- ***See the "mechanism assembly" diagram of the "parts list" for the lubricating or greasing spots, and for the types of oil or grease to be used.***

1.6.3 Suggested servicing schedule for main components

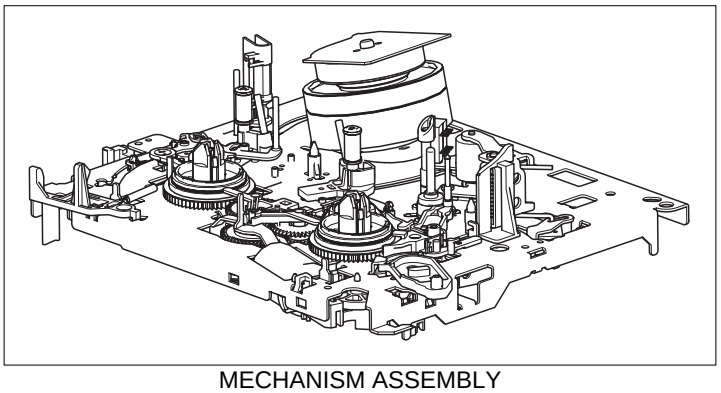
The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time, even if the set is not used.

System	Parts name	Operation hours	
		1000H	2000H
Tape transport	Drum assembly	C,X	X
	A/C head	C,X	C,X
	Pinch roller arm assembly	C	C
	Full erase head	C	C
	Tension arm assembly	C	C
	Capstan motor (Shaft)	C	C
	Guide arm assembly	C	C
Drive	Capstan motor		X
	Capstan brake assembly		X
	Main brake assembly		X
	Belt (Capstan)	X	X
	Loading motor		X
	Clutch unit		X
	Worm gear		X
	Control plate		X
Other	Rotary encoder		X

C : Cleaning
X : Inspection or Replacement if necessary

SECTION 2
MECHANISM

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).



MECHANISM ASSEMBLY

SECTION 3
ADJUSTMENT

3.1 Before adjustment

3.1.1 Precaution

- ***The adjustments of this unit include the mechanism compatibility and electrical adjustments. During the performance of this work, be sure to observe the precautions for each type of adjustment.***
- ***If there is a reference to a signal input method in the signal column of the adjustment chart, "Ext. S-input" means the Y/C separated video signal and "Ext. input" means the composite video signal input.***
- ***Unless otherwise specified, all measuring points and adjustment parts are located on the Main board.***

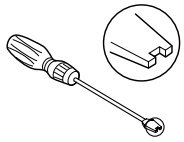
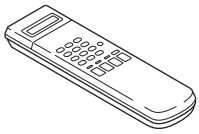
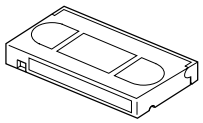
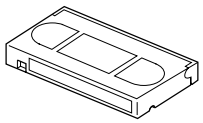
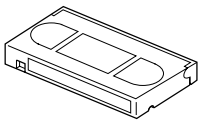
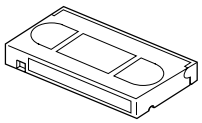
3.1.2 Required test equipments

- Color (colour) television or monitor
- Oscilloscope: wide-band, dual-trace, triggered delayed sweep
- Signal generator: RF / IF sweep / marker
- Signal generator: stairstep, color (colour) bar [NTSC]
- Recording tape
- Digit-key remote controller(provided)

3.1.3 Required adjustment tools

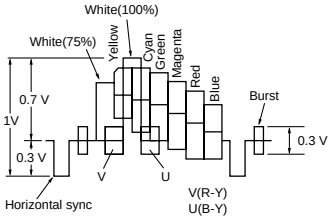
○ : Used — : Not used

	Machanism compatibility adjustment	Electrical adjustment
Roller driver	○	–
Jig RCU	–	○
Back tension cassette gauge	○	–
Alignment tape(MHPE)	○	○
Alignment tape(MHPE-L)	○	○
Alignment tape(MHP-L)	–	○

Roller driver PTU94002	Jig RCU PTU94023B	Back tension cassette gauge PUJ48076-2
		
Alignment tape (SP, stairstep, PAL) MHPE	Alignment tape (LP, stairstep, PAL) MHPE-L	Alignment tape (EP, stairstep, NTSC) MHP-L
		

3.1.4 Color (colour) bar signal, color (colour) bar pattern

• Color(colour) bar signal [PAL]



• Color(colour) bar pattern [PAL]

3.1.5 Switch settings

When adjusting this unit, set the VCR mode and switches as described below.

- When using the Jig RCU, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received). (See "section 1 disassembly".)

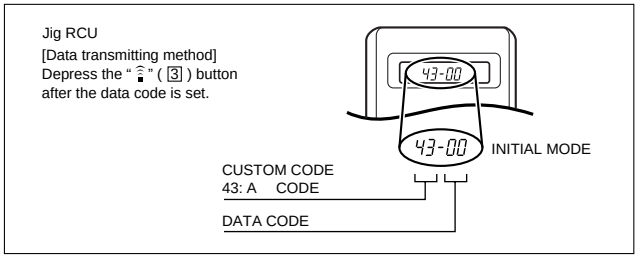


Fig. 3-1-5a Jig RCU [PTU94023B]

- Set the switches as shown below unless otherwise specified on the relevant adjustment chart. The switches that are not listed below can be set as desired.
  If the VCR is not equipped with the functions detailed below, setup is not required.

AUTO PICTURE/VIDEO CALIBRATION/ B.E.S.T./D.S.P.C.	OFF
PICTURE CONTROL/SMART PICTURE	NORMAL/NATURAL
VIDEO STABILIZER	OFF
TBC	ON
Digital 3R	ON
VIDEO NAVIGATION/TAPE MANAGER	OFF
BLUE BACK	OFF

3.1.6 Manual tracking mode (Auto tracking ON/OFF) setting

(1) In order to set to the manual tracking mode during tape playback, press the “SP/EP(LP)” button on the remote control unit.
  • Each press of the button switches the auto tracking ON or OFF.
  • When the auto tracking is OFF, the monitor screen displays “AT: OFF”.
  • When the manual tracking mode is set, the tracking is placed at the center position.
(2) Press “channel +/-” to adjust the tracking manually.

3.1.7 EVR adjustment

Some of the adjustments require the adjustment performed by the EVR system. The main unit have EEPROMs for storing the EVR adjustment data and user setups.

Notes:

- ***In the EVR adjustment mode, the value is varied with the channel buttons (+, –). The adjusted data is stored when the setting mode changes (from PB to STOP, when the tape speed is changed, etc.). Take care to identify the current mode of each adjustment item when making an adjustment.***
- ***When changing the address setting in the EVR adjustment mode, use the Jig RCU or the remote controller having numeric keypad with which a numeric code can be directly input.***
  The remote control code of the Jig RCU corresponds to each of the digit keys on the remote controller as follows.

Digit-key	0	1	2	3	4	5	6	7	8	9
Code	20	21	22	23	24	25	26	27	28	29

- ***As the counter indication and remaining tape indication are not displayed FDP during the EVR adjustment mode, check them on the TV monitor screen.***
- ***When performing the EVR adjustment, confirm that the FDP indication is changed to the EVR mode, as shown below.***

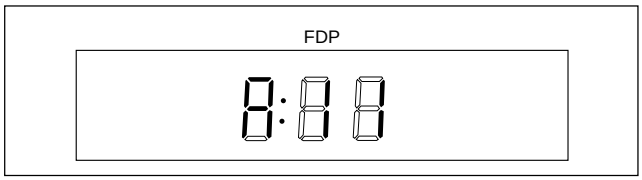


Fig. 3-1-7a EVR mode

3.2 Mechanism compatibility adjustment

Notes:

- ***Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the A/C head, drum assembly or any part of the tape transport system.***
- ***To prevent damaging the alignment tape in the compatibility adjustment, prepare a cassette tape (for self-recording/playback), perform a test on it by transporting it and making sure that the tape is not bent by the tape transport mechanisms such as in the guide rollers.(See Fig.3-2-2a.)***

3.2.1 Tension pole position

Notes:

- ***This adjustment must be performed every time the tension band is replaced.***

Signal	(A)	• Back tension cassette gauge [PUJ48076-2]
Mode	(B1)	• PB
	(B2)	• Eject end
Adjustment part	(F)	• Adjust pin [Mechansim assembly]
Specified value	(G)	• 25 - 51 gf•cm (2.45 – 5 × 10^{-3} Nm)

(1) Play back the back tension cassette gauge (A).
(2) Check that the indicated value on the left side gauge is within the specified value (G).
(3) If the indicated value is not within the specified value (G), perform the adjustment in a following procedure.(See Fig.3-2-1a.)
  1) Remove the top frame, cassette holder and side frames (L/R) all together. (See “section 2 mecha-nism”.)
  2) Rotate the loading motor gear to move the control plate so that the triangular stamping to the left of the “P” stamping is aligned with the stamping (a) on the main deck. This positioning is mode (B1).
  3) Adjust by turning the adjustment pin so that the tip of the tension arm is aligned with the stamping (b) on the main deck.
  4) Rotate the reel disk (S) by about one turn clockwise and make sure that the round hole of the adjustment pin is located in the “OK” range.
    If it is outside this range, restart the adjustment from the beginning.
  After completion of the adjustment, rotate the loading gear motor to return it to the mode (B2) position.

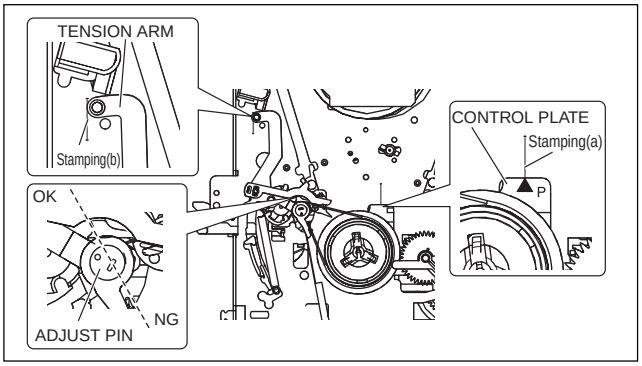


Fig. 3-2-1a

3.2.2 FM waveform linearity

Signal	(A1) (A2)	• Alignment tape(SP, stairstep, PAL) [MHPE] • Alignment tape(LP, stairstep, PAL) [MHPE-L]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Guide roller [Mechanism assembly]
Specified value	(G)	• Flat V.PB FM waveform
Adjustment tool	(H)	• Roller driver [PTU94002]

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Set the VCR to the manual tracking mode.
(4) Make sure that there is no significant level drop of the V.PB FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig. 3-2-2b.)
(5) Reduce the V.PB FM waveform by the tracking operation. If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver to make the V.PB FM waveform linear.
If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the roller driver to make it linear. (See Fig. 3-2-2b.)
(6) Make sure that the V.PB FM waveform varies in parallel and linearly with the tracking operation again. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
(7) Unload the cassette tape once, play back the alignment tape (A1) again and confirm the V.PB FM waveform.
(8) After adjustment, confirm that the tape wrinkling does not occur at the roller upper or lower limits. (See Fig. 3-2-2a.)

[Perform adjustment step (9) only for the models equipped with SP mode and EP (or LP) mode.]

(9) Repeat steps (1) to (8) by using the alignment tape (A2).

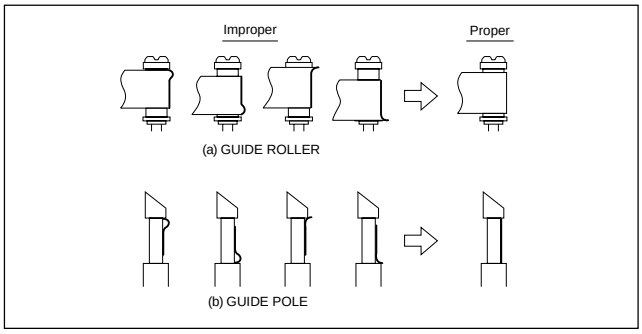


Fig. 3-2-2a

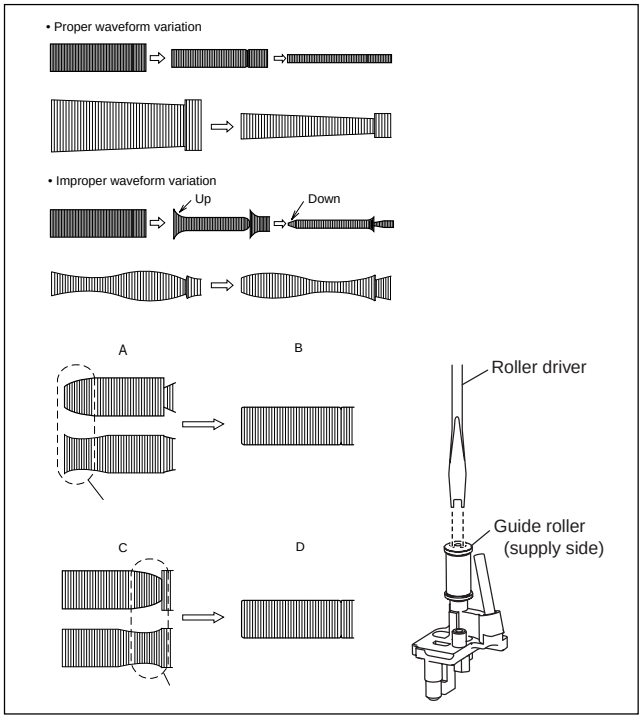


Fig. 3-2-2b

3.2.3 Height and tilt of the A/C head

Note:

• Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (See "section 2 mechanism".)

Signal	(A)	• Alignment tape(SP, stairstep, PAL) [MHPE]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• AUDIO OUT terminal • TP4001 (CTL. P)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head [Mechanism assembly]
Specified value	(G)	• Maximum waveform

(1) Play back the alignment tape (A).
(2) Apply the external trigger signal to D.FF (E), to observe the AUDIO OUT waveform and Control pulse waveform at the measuring points (D1) and (D2) in the ALT mode.
(3) Set the VCR to the manual tracking mode.
(4) Adjust the AUDIO OUT waveform and Control pulse waveform by turning the screws (1), (2) and (3) little by little until both waveforms reach maximum. The screw (1) and (3) are for adjustment of tilt and the screw (2) for azimuth.

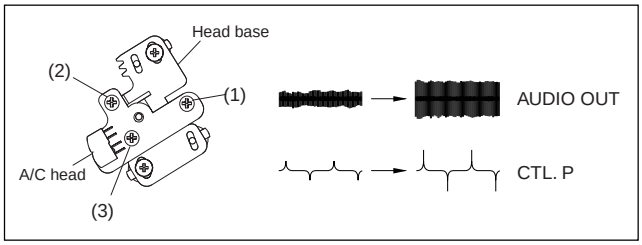


Fig. 3-2-3a

3.2.4 A/C head phase (X-value)

Signal	(A1) (A2)	• Alignment tape(SP, stairstep, PAL) [MHPE] • Alignment tape(LP, stairstep, PAL) [MHPE-L]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head base [Mechanism assembly]
Specified value	(G)	• Maximum V.PB FM waveform
Adjustment tool	(H)	• Roller driver [PTU94002]

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Set the VCR to the manual tracking mode.
(4) Loosen the screws (4) and (5), then set the Roller driver to the innermost projected part of the A/C head. (See Fig. 3-2-4a.)
(5) Rotate the roller driver so that the A/C head comes closest to the capstan. From there, move the A/C head back gradually toward the drum until the point where the FM waveform is maximized for the second time, and then tighten the screws (4) and (5) temporarily.
(6) Play an alignment tape (A2) and set to the manual-tracking mode.
(7) Fine-adjust A/C head base position to maximize the FM waveform, and then tighten the screws (4) and (5) firmly.
(8) Play alignment tapes (A1) and (A2) and confirm that the FM waveforms are maximized when the tracking is at the center position.

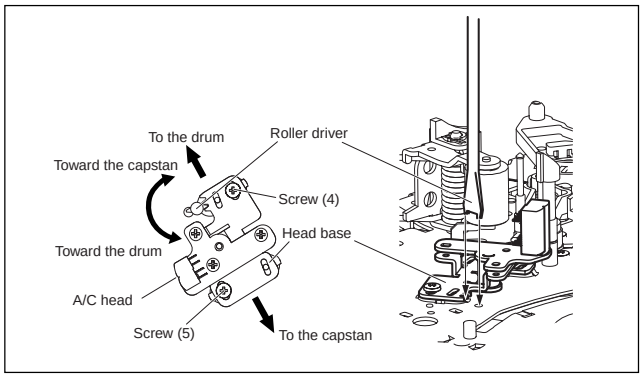


Fig. 3-2-4a

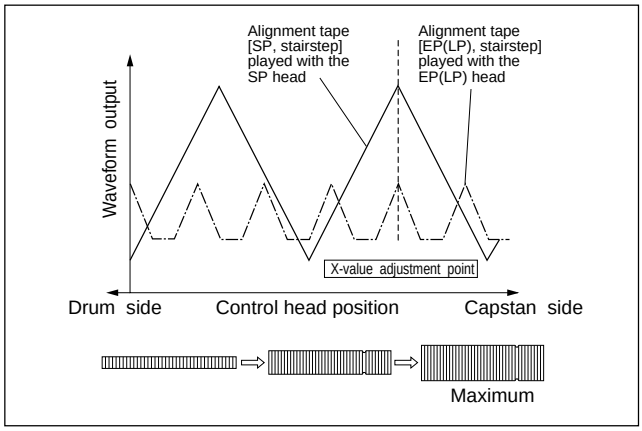


Fig. 3-2-4b

3.3 Electrical adjustment

Note:
The following adjustment procedures are not only necessary after replacement of consumable mechanical parts or board assemblies, but are also provided as references to be referred to when servicing the electrical circuitry.
In case of trouble with the electrical circuitry, always begin a service by identifying the defective points by using the measuring instruments as described in the following electrical adjustment procedures. After this, proceed to the repair, replacement and/or adjustment. If the required measuring instruments are not available in the field, do not change the adjustment parts (variable resistor, etc.) carelessly.

3.3.1 Servo circuit

3.3.1.1 Switching point

Signal	(A1) (A2)	• Stairstep signal • Alignment tape (LP, stairstep, PAL) [MHPE-L]
Mode	(B)	• PB • TBC:OFF
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• VIDEO OUT terminal (75Ω terminated) • TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Jig RCU: Code “5A”
Specified value	(G)	• 7.5 ±0.5 H
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Play back the signal (A1) of the alignment tape (A2).
(2) Apply the external trigger signal to D. FF (E) to observe the VIDEO OUT waveform and V. PB FM waveform at the measuring points (D1) and (D2).
(3) Set the VCR to the manual tracking mode.
(4) Adjust tracking so that the V. PB FM waveform becomes maximum.
(5) Set the VCR to the Auto adjust mode by transmitting the code (F) from the Jig RCU. When the VCR enters the stop mode, the adjustment is completed.
(6) If the VCR enters the eject mode, repeat steps (1) to (5) again.
(7) Play back the alignment tape (A2) again, confirm that the switching point is the specified value (G).

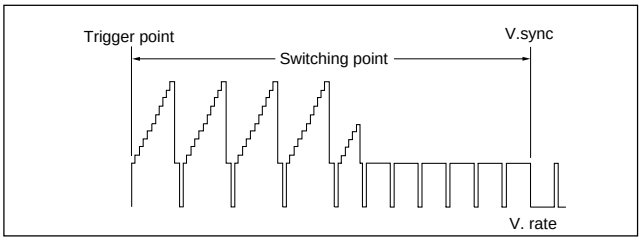


Fig. 3-3-1-1a Switching point

3.3.1.2 Slow tracking preset

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [PAL]
Mode	(B1) (B2)	• VHS SP • VHS LP
Measuring point	(D)	• TV-Monitor
Adjustment part	(F)	• Jig RCU: Code “71“ or “72”
Specified value	(G)	• disappear noise
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Record the signal (A2) in the mode (B1), and play back the recorded signal.
(2) Set the VCR to the manual tracking mode.
(3) Set the VCR to the FWD slow (+1/6x) mode.
(4) Transmit the code (F) from the Jig RCU to adjust so that the noise bar becomes the specified value (G) on the TV monitor in the slow mode.
(5) Set the VCR to the Stop mode.
(6) Confirm that the noise bar is (G) on the TV monitor in the slow mode.
(7) Repeat steps (3) to (6) in the REV slow (–1/6x) mode.
(8) Repeat steps (1) to (7) in the mode (B2).

Note:

- ***For FWD slow (+1/6x) playback, transmit the code “08” from the Jig RCU to enter the slow playback mode, and transmit the code “D0” for REV slow (–1/6x) mode.***

3.3.2 Video circuit

3.3.2.1 EE Y/PB Y (S-VHS/VHS) level

Signal	(A1) (A2) (A3)	• Ext. S-input • Ext. input • Color (colour) bar signal [PAL]
Mode	(B1) (B2) (B3)	• EE SP • S-VHS SP • VHS SP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• Y OUT terminal (75Ω terminated)
EVR mode EVR address	(F1) (F2) (F3) (F4)	• Jig code “57” • A : 11 • Jig code “21” twice • Jig code “18” or “19” (Channel +/-)
Specified value	(G)	• 1.00 ± 0.05 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Input the signal (A3) from the input point (A1).
(2) Set the VCR to the mode (B1).
(3) Observe the Y OUT waveform at the measuring point (D).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by transmitting the code (F3) from the Jig RCU.
(6) Transmit the code (F4) from the Jig RCU to adjust so that the Y level of the Y OUT waveform becomes the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(8) Input the signal (A3) from the input point (A2).
(9) Repeat steps (3) to (7) in the mode (B1).
(10) Record the signal (A3) in the mode (B2), and play back the recorded signal.
(11) Set the VCR to the manual tracking mode.
(12) Repeat steps (3) to (7) in the mode (B2).
(13) Record the signal (A3) in the mode (B3), and play back the recorded signal.
(14) Set the VCR to the manual tracking mode.
(15) Repeat steps (3) to (7) in the mode (B3).

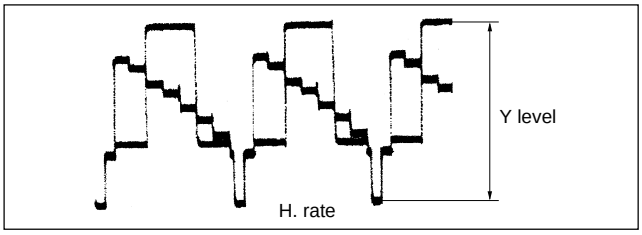


Fig. 3-3-2-1a EE/PB Y level

3.3.3 Audio circuit

Notes:

- ***GND (Ground) should be taken from the Tuner shield case.***

3.3.3.1 Audio REC FM

Signal	(A1) (A2) (A3)	• Ext. input • Audio: No signal • Video: Color (colour) bar signal [PAL]
Mode	(B)	• S-VHS LP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP2253 (A. PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• VR2251
Specified value	(G1) (G2)	• 700 ± 100 mVp-p • More than 450 mVp-p

(1) Apply the external trigger signal to D.FF (E) to observe the Audio PB FM waveform at the measuring point (D).
(2) Record the signal (A3) with no audio signal input in the mode (B), and play back the recorded signal.
(3) Set the VCR to the manual tracking mode.
(4) If the A.PB FM level is not within the specified value (G1), perform the adjustment in a following procedure.
(5) Adjust the Adjustment part (F) so that the A. PB FM level of the higher channel level becomes the specified value (G1). (Adjust before recording, then confirm it by playing back.)
(6) If the specified value (G1) is not obtained, adjust the Adjustment part (F) so that the waveform level of the lower channel level becomes the specified value (G2). (Adjust before recording, then confirm it by playing back.)

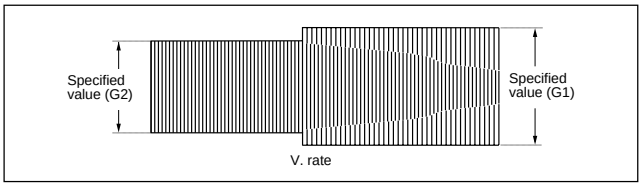


Fig. 3-3-3-1a Audio REC FM

3.3.4 Digital circuit

Note:

- ***Perform this adjustment after "EE Y LEVEL" adjustment.***
- ***This adjustment can not perform at the STANDALONE mode. Cancel the STANDALONE mode.***
- ***When canceling STANDALONE mode, surely pull out the AC cord from power outlet once to reset the Host CPU.***

3.3.4.1 HDD Y LEVEL

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [PAL]
Mode	(B)	• HDD(Live memory playback)
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• VIDEO OUT terminal (75Ω terminated)
EVR mode EVR address	(F1) (F2) (F3) (F4)	• Jig code “95” • b : 22 • Jig code “21” • Jig code “18” or “19” (Channel +/-)
Specified value	(G)	• 1.00 ± 0.02 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Input the signal (A2) from the input point (A1).
(2) Set the VCR to the mode (B).
(3) Observe the VIDEO OUT waveform at the measuring point (D).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by transmitting the code (F3) from the Jig RCU.
(6) Transmit the code (F4) from the Jig RCU to adjust so that the Y level of the VIDEO OUT waveform becomes the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

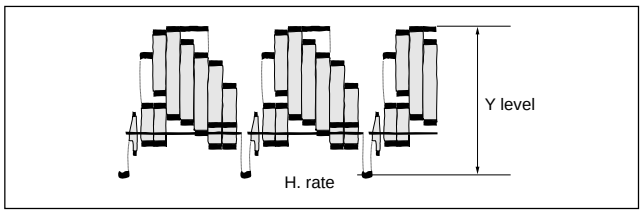


Fig. 3-3-4-1a HDD Y level

3.3.4.2 HDD C LEVEL

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [PAL]
Mode	(B)	• HDD(Live memory playback)
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• VIDEO OUT terminal (75Ω terminated)
EVR mode EVR address	(F1) (F2) (F3) (F4)	• Jig code “95” • b : 23 • Jig code “22” • Jig code “18” or “19” (Channel +/-)
Specified value	(G)	• 0.300 ± 0.02 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Input the signal (A2) from the input point (A1).
(2) Set the VCR to the mode (B).
(3) Observe the VIDEO OUT waveform at the measuring point (D).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by transmitting the code (F3) from the Jig RCU.
(6) Transmit the code (F4) from the Jig RCU to adjust so that the Y level of the VIDEO OUT waveform becomes the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

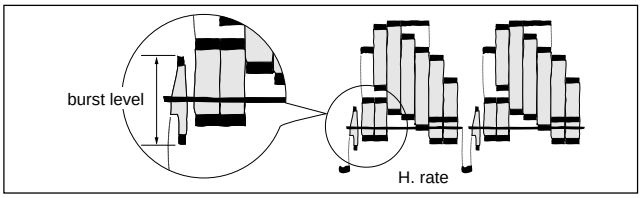


Fig. 3-3-4-2a HDD C level

3.3.4 Syscon circuit [HM-HDS4EX]

Note:

- ***When perform this adjustment, remove the Mechanism assembly.***

3.3.4.1 Timer clock

Signal	(A)	• No signal
Mode	(B)	• EE
Equipment	(C)	• Frequency counter
Measuring point Short point	(D1) (D2) (D3)	• IC3001 pin 61 • IC3001 pin 24 • C3026 + and –
Adjustment part	(F)	• C3025 (TIMER CLOCK)
Specified value	(G)	• 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 µsec)

(1) Connect the frequency counter to the measuring point (D1).
(2) Connect the short wire between the short point (D2) and Vcc (5V).
(3) Short the leads of capacitor (D3) once in order to reset the microprocessor of the SYSCON.
(4) Disconnect the short wire between the short point (D2) and Vcc then connect it again.
(5) Adjust the Adjustment part (F) so that the output frequency becomes the specified value (G).

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY. 12,3-chome,Moriya-cho,Kanagawa-ku,Yokohama,Kanagawa-prefecture,221-8528,Japan

Printed in Japan
0306 VP

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

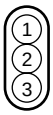
2. Indications of control voltage

AUX : Active at high.

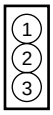
$\overline{AUX}$ or AUX(L) : Active at low.

3. Interpreting Connector indications

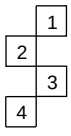
Removable connector



Wire soldered directly on board



Non-removable Board connector



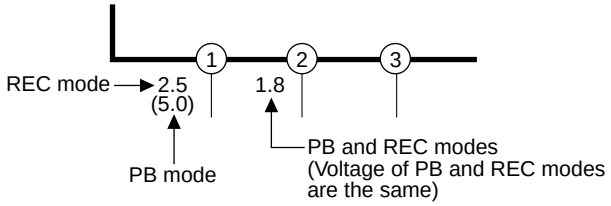
Board to Board

Connected pattern on board
The arrows indicate signal path

Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.

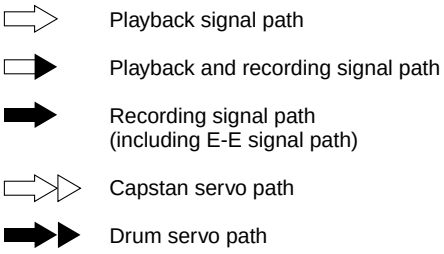


Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

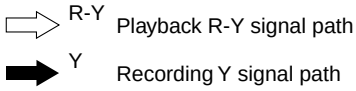
5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.

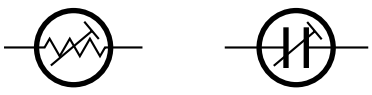


(Example)



6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

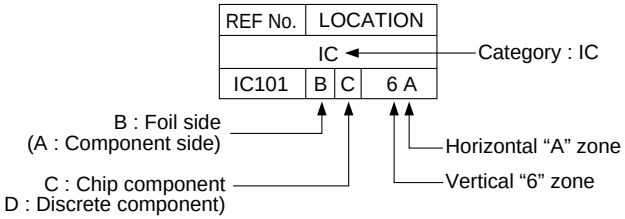
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

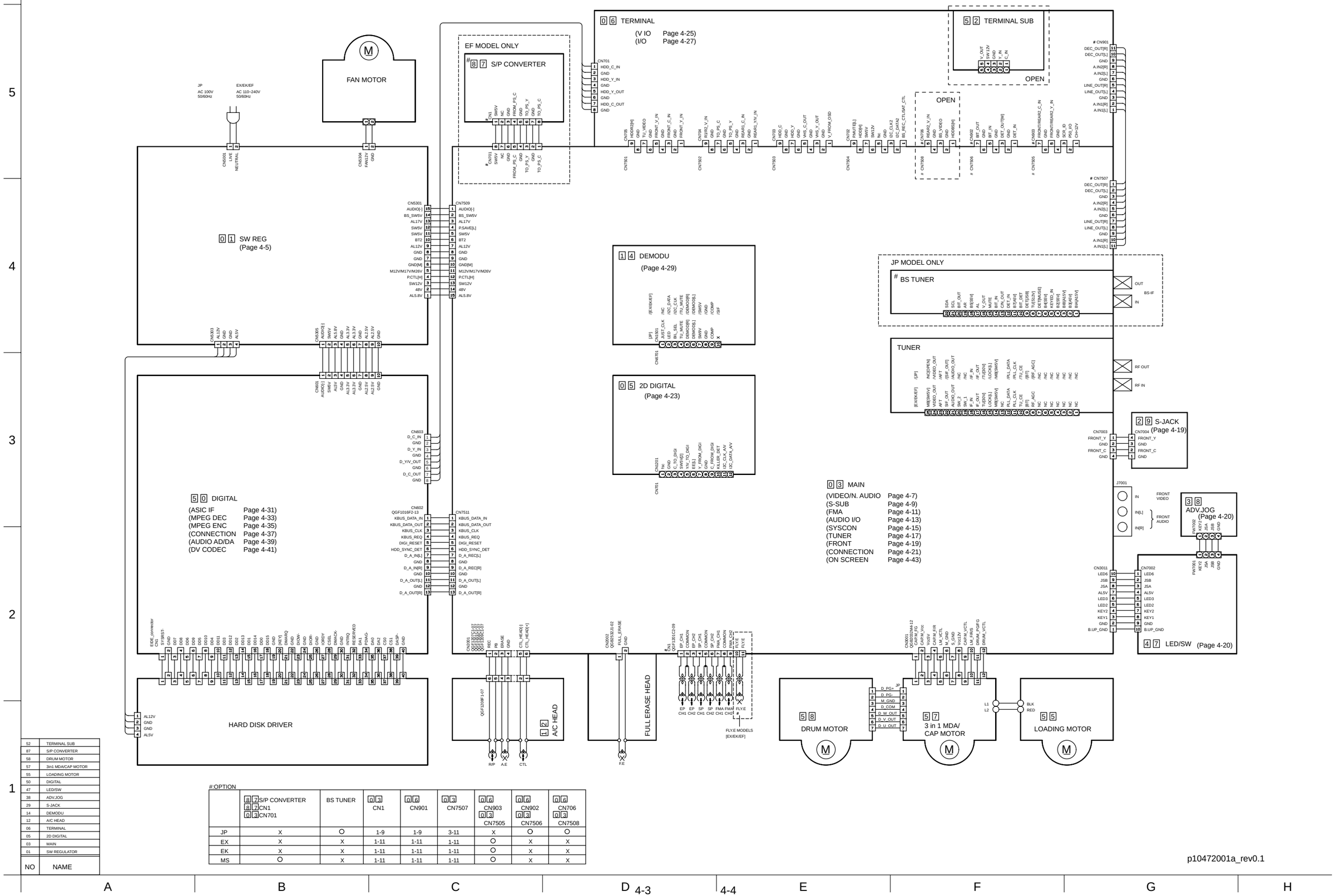
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS



52	TERMINAL SUB
87	S/P CONVERTER
58	DRUM MOTOR
57	3in1 MDA/CAP MOTOR
55	LOADING MOTOR
50	DIGITAL
47	LED/SW
38	ADV.JOG
29	S-JACK
14	DEMODU
12	A/C HEAD
06	TERMINAL
05	2D DIGITAL
03	MAIN
01	SW REGULATOR
NO	NAME

#:OPTION

	8 7 S/P CONVERTER 8 7 CN1 0 3 CN701	BS TUNER	0 3 CN1	0 6 CN901	0 3 CN7507	0 6 CN903 0 3 CN7505	0 6 CN902 0 3 CN7506	0 6 CN706 0 3 CN7508
JP	X	O	1-9	1-9	3-11	X	O	O
EX	X	X	1-11	1-11	1-11	O	X	X
EK	X	X	1-11	1-11	1-11	O	X	X
MS	O	X	1-11	1-11	1-11	O	X	X

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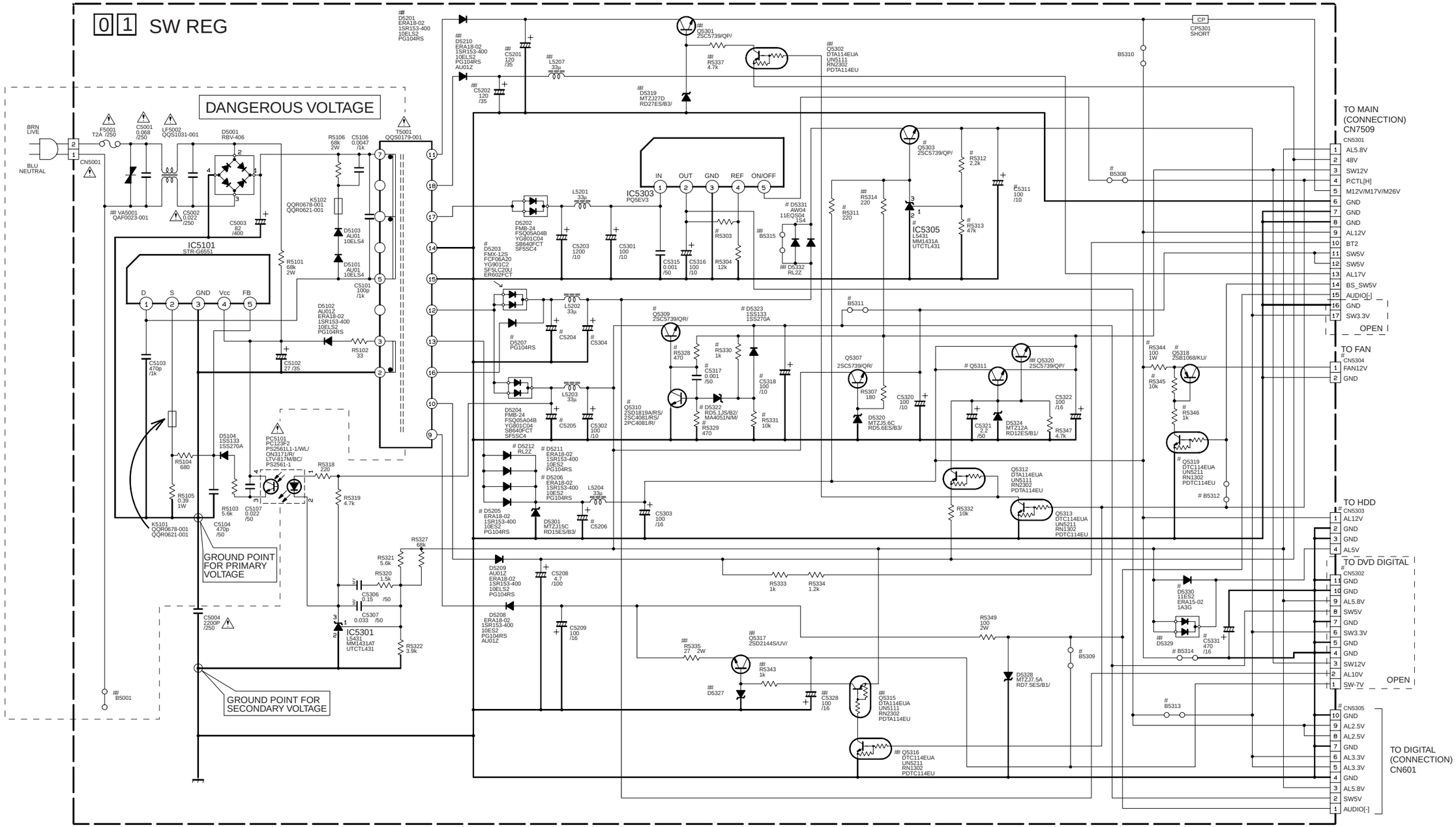
4.2 SW REG SCHEMATIC DIAGRAM



##MARK ELEMENTS ARE NOT MOUNTED

#DIFFERENCE TABLE 1

	HDD D5203 D5330 CN5303 CN5305	DVD D5207 CN5302	FAN Q5318 Q5319 R5344 R5345 R5346 CN5304 B5312	B5308	AL3.3V IC5305 Q5303 R5311 R5312 R4313 C5311 D5331	B5314 C5331	R5303	C5204	C5205	C5206	C5304	CN5301	B5309	B5313	SW5V Q5309 R5330 Q5310 R5331 D5322 C5317 D5323 R5318 R5328 R5329	B5311	D5212	D5205 D5206 D5211	Q5311	D5331
HDS4	YES	NO	YES	NO	YES	YES	13k	1000/10	1500/10	680/16	100/10	1-15	NO	NO	NO	YES	YES	NO	2SD2144S/UV/	YES
XVS20	NO	YES	NO	YES	NO	NO	22k	1000/16	1200/10	1000/16	100/16	1-17	YES	YES	YES	NO	NO	YES	2SD1856/QR/	NO

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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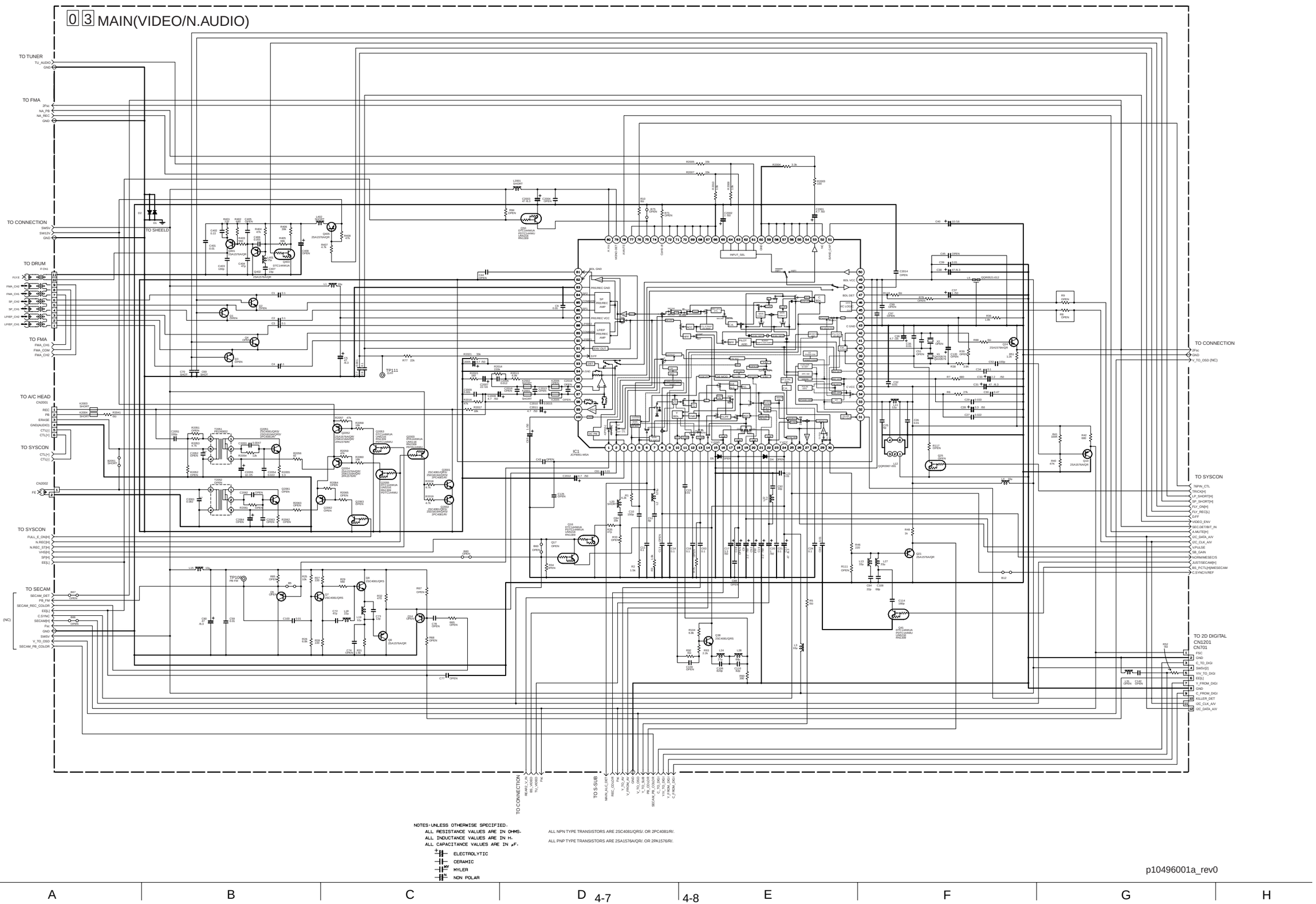
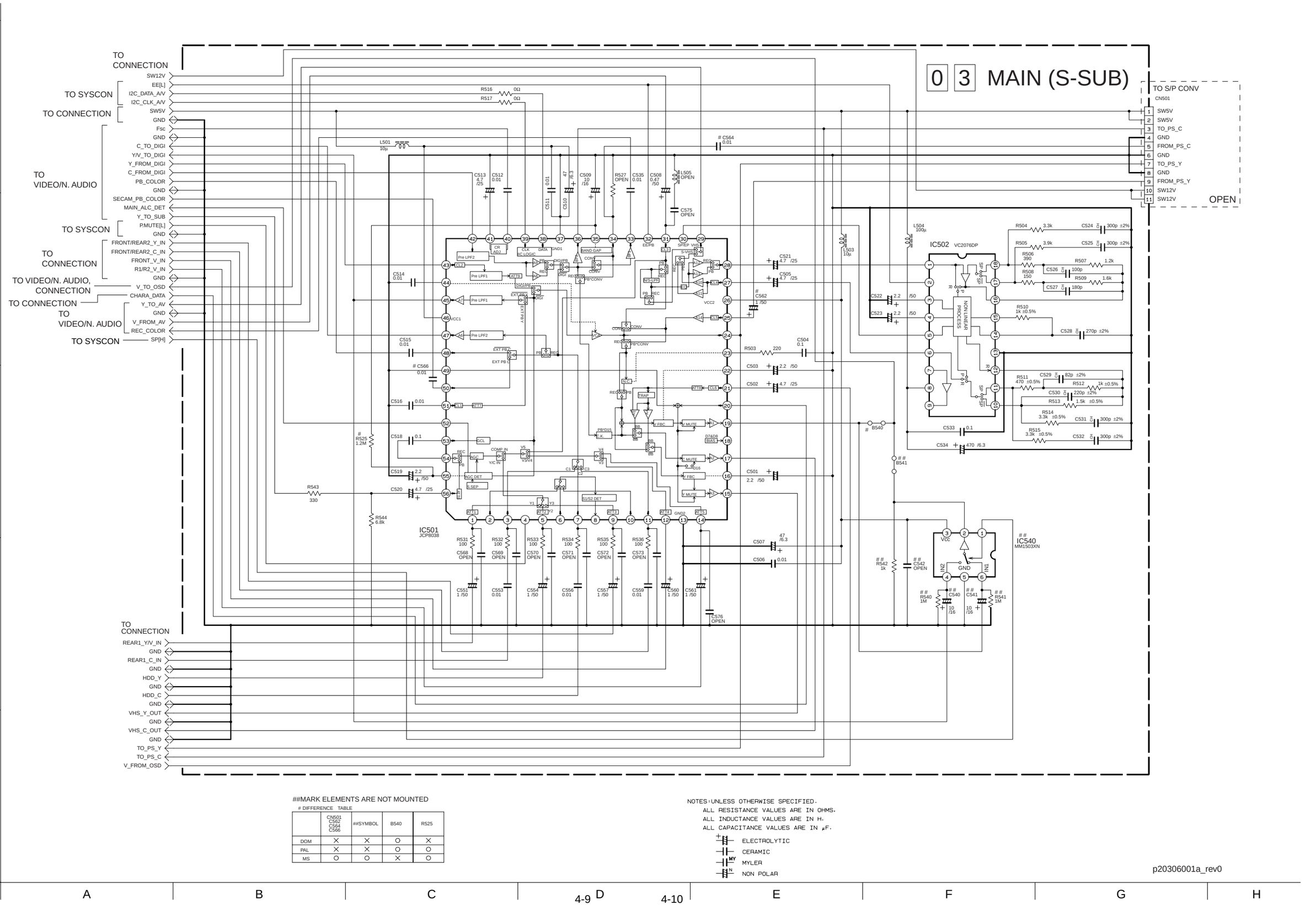
4.3 MAIN (VIDEO/N.AUDIO) SCHEMATIC DIAGRAM



4.4 MAIN (S-SUB) SCHEMATIC DIAGRAM



##MARK ELEMENTS ARE NOT MOUNTED

DIFFERENCE TABLE

	CN501 C562 C564 C566	##SYMBOL	B540	R525
DOM	×	×	○	×
PAL	×	×	○	○
MS	○	○	×	○

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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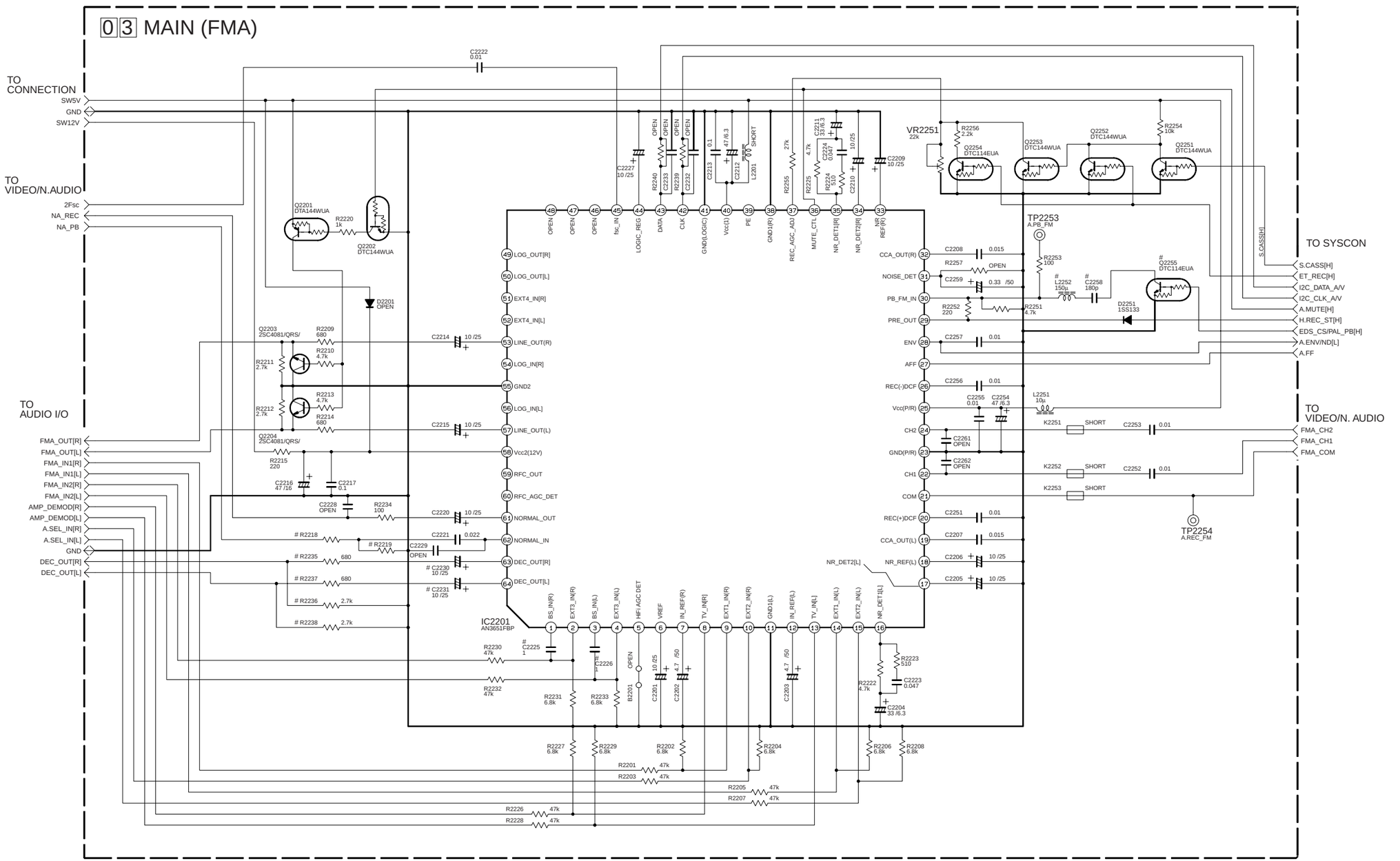
4.5 MAIN (FMA) SCHEMATIC DIAGRAM



DIFFERENCE TABLE

SYMBOL / SECAM/MESECAM	Q2255,L2252 C2258
JP/EK	×
EX/EF	○

SYMBOL	R2235-R2238 C2225,C2226 C2230,C2231	R2218	R2219
JP	×	3.9k	1k
EK/EX/EF	○	3.3k	1.2k

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC

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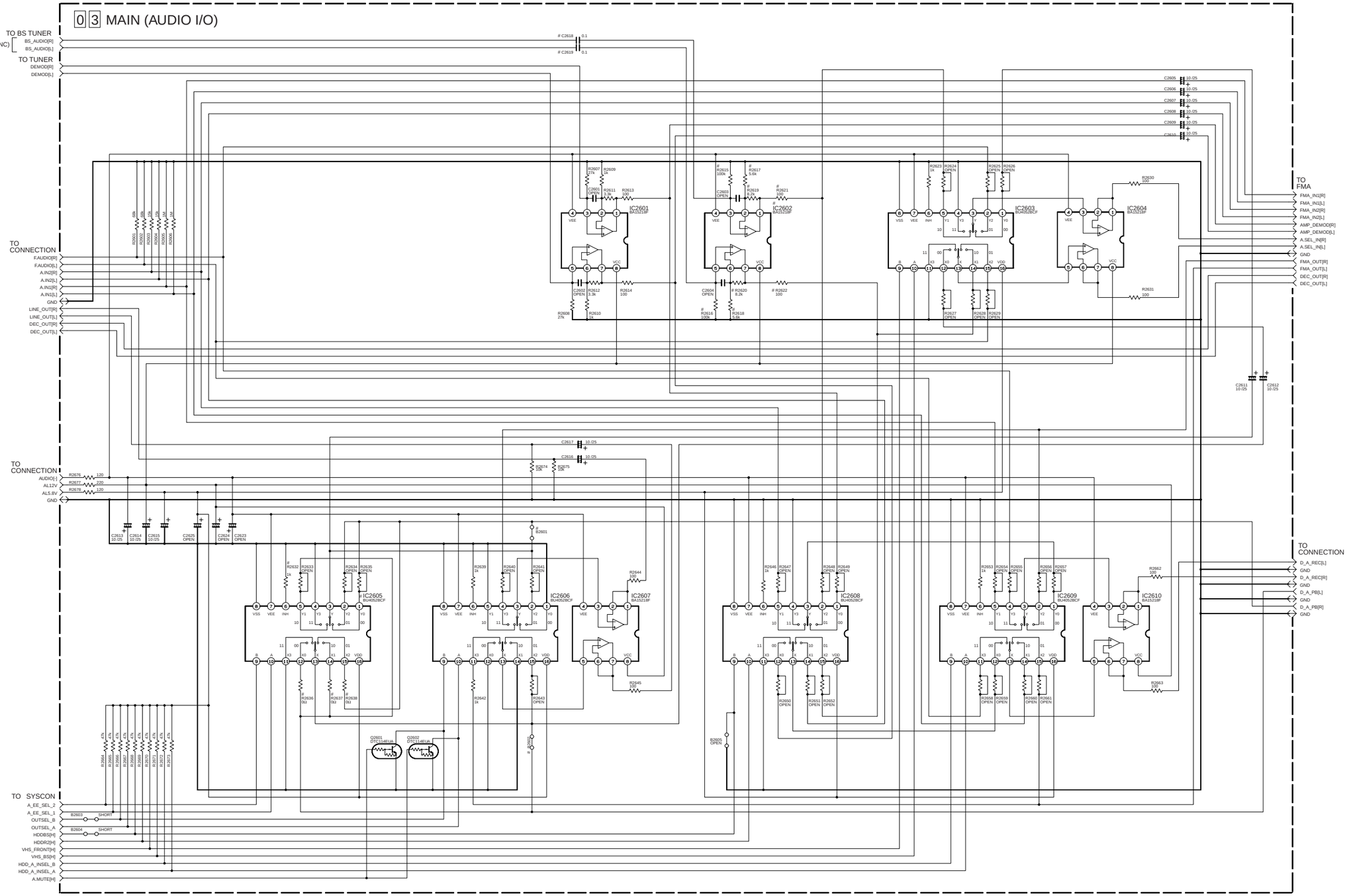
4.6 MAIN (AUDIO I/O) SCHEMATIC DIAGRAM



DIFFERENCE TABLE

SYMBOL / BS	IC2602 R2615-R2622 C2618,C2619
YES	○
NO	×

SYMBOL / DVC EDT	IC2605 R2632-R2638	B2601 B2602
YES	○	×
NO	×	○

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC

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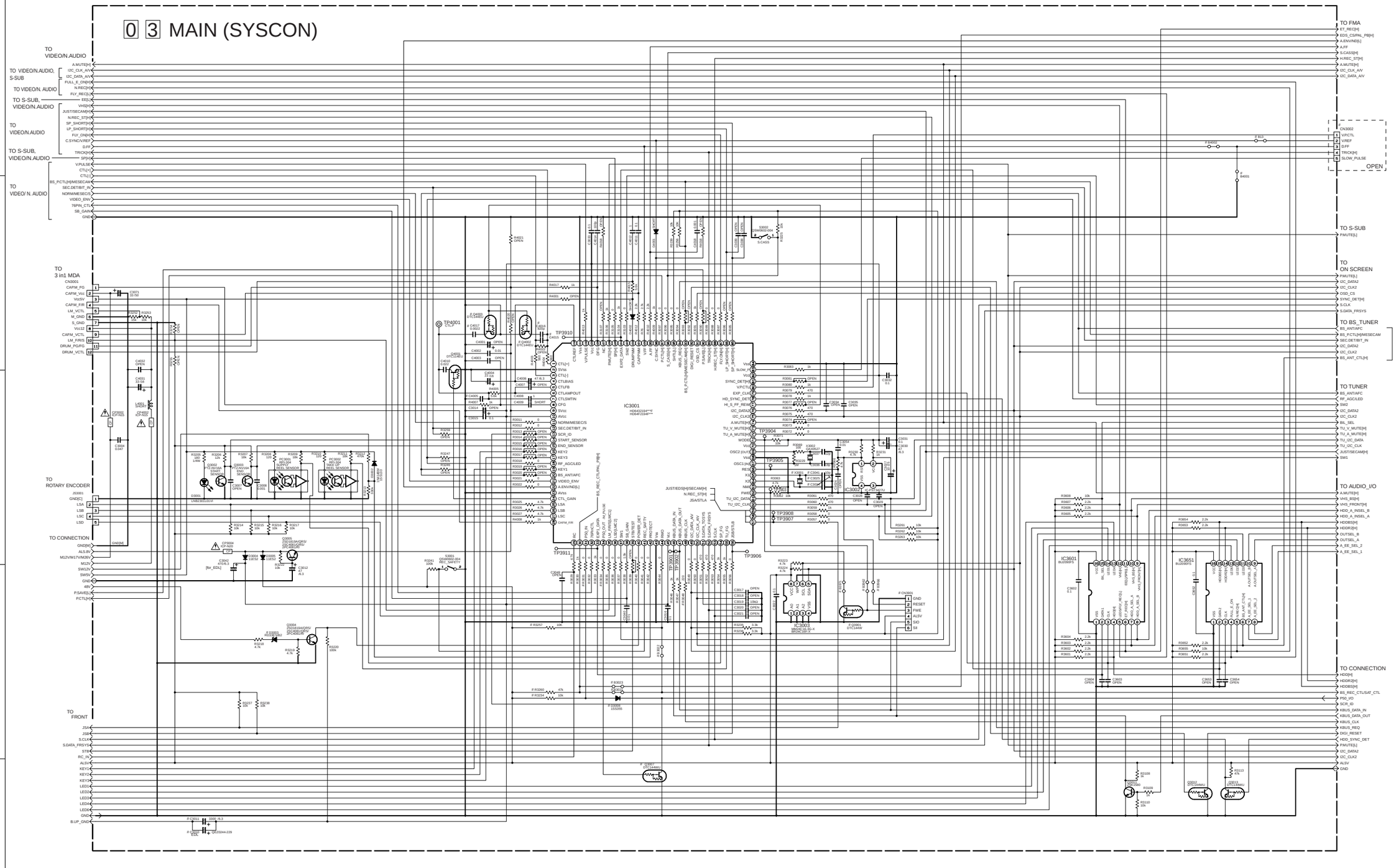
4.7 MAIN (SYSCON) SCHEMATIC DIAGRAM



#:OPTION

SYMBOL	CN3901	Q3901	B3901	B3971	B3966	C3010	C3011	R3257	R3031	R3034	R3234	D3008	Q3007	B3021	B3022	B3023	R3260	X3001	C3024	C3025	C3041	Q4002	Q4003	C4016	C4017	C4005	C4015	CN3002	B4001	B4002	B13
JP	×	×	×	×	×	○	×	○	×	×	×	×	×	○	×	×	○	QAX0444-001	12p	×	○	○	○	○	○	×	220p	×	○	×	×
EX	×	×	×	×	×	×	○	×	○	○	○	○	○	×	○	○	×	QAX0445-001	22p	30p	×	×	×	×	×	0.0022	1000p	×	○	×	×
EK	×	×	×	×	×	×	○	×	○	○	○	○	○	×	○	○	×	QAX0444-001	12p	×	○	×	×	×	×	0.0022	1000p	×	○	×	×
EF	×	×	×	×	×	×	○	×	○	○	○	○	○	×	○	○	×	QAX0444-001	12p	×	○	×	×	×	×	0.0022	1000p	×	○	×	×

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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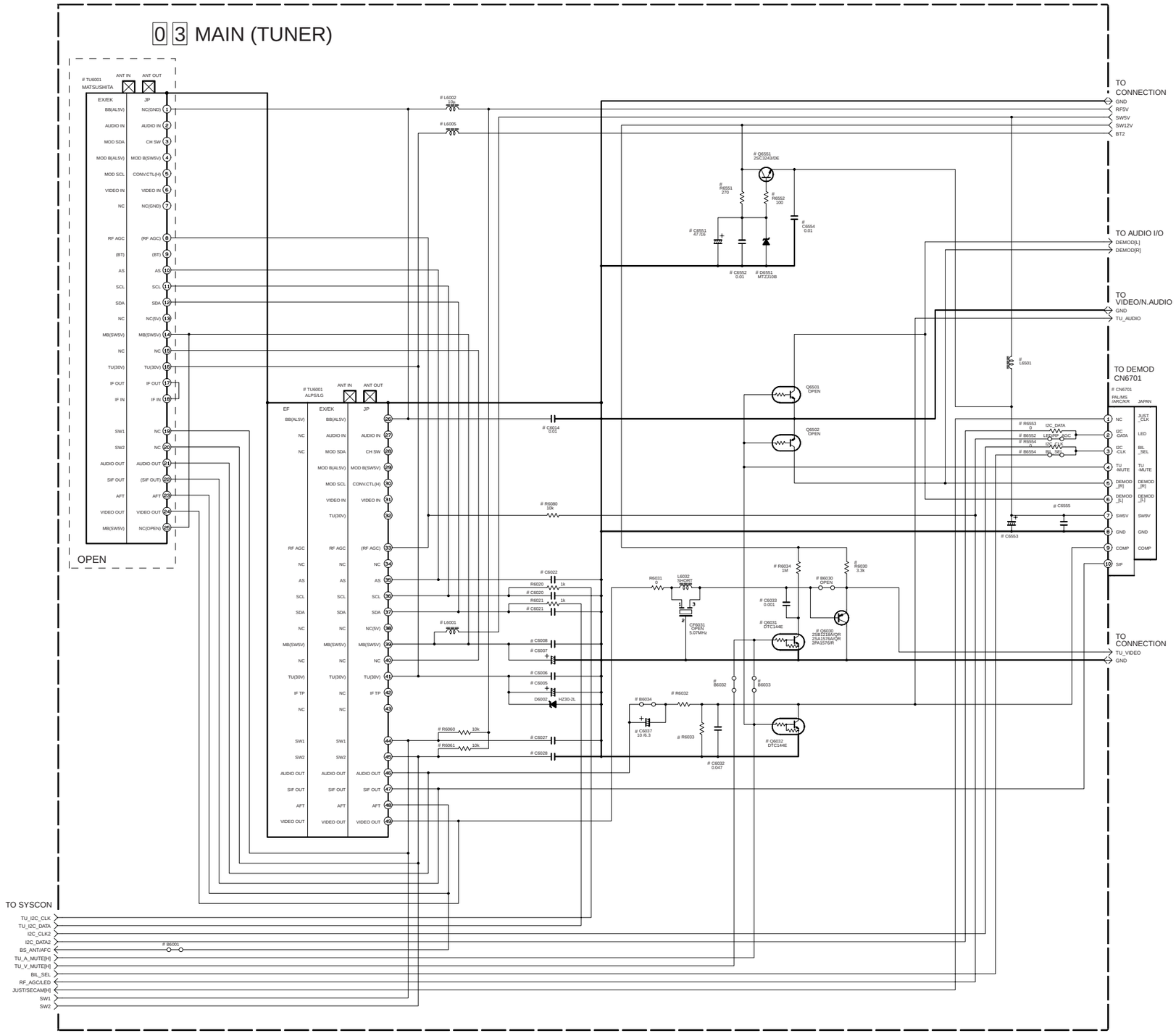
4-15 4-16

4.8 MAIN (TUNER) SCHEMATIC DIAGRAM



DIFFERENCE TABLE

ITEM	SYMBOL	JP	EX/EK	EF
TUNER	TU6001	MATSHUSHITA QAU0224	ALPS QAU0261	LG QAU0299
BB(AL5V)	L6002, C6014	×	○	○
RF AGC	R6080	×	○	○
AS	C6022	×	×	×
SCL	C6020	×	×	×
SDA	C6021	×	×	×
MB(SW5V)	L6001	SHORT	10µ	10µ
	C6007	×	330/6.3	330/6.3
	C6008	×	×	×
TU(30V)	L6005	SHORT	SHORT	SHORT
	C6005	×	×	×
	C6006	×	×	×
SW1	R6060	×	○	○
	C6027	×	×	×
SW2	R6061	×	○	○
	C6028	×	×	×
AFC	B6001	×	○	○
VIDEO BUFFER	B6030	×	×	○
	R6030,Q6030	○	○	×
VIDEO MUTE	R6034	×	×	×
	C6033	×	0Ω	0Ω
	Q6031	×	○	○
	B6032	×	○	○
	B6033	×	×	×
AUDIO OUT	B6034	○	×	×
	C6037	×	○	○
AUDIO LEVEL	R6032	0	4.7k	18k
	R6033	×	1.8k	18k
	C6032	×	○	×
AUDIO MUTE	Q6032	×	○	○
DEMOD REG	R6551, R6552, C6554, Q6551, D6551	○	×	×
	C6551, C6552,	×	×	×
	L6501	×	○	○
	C6553	×	○	○
	C6555	×	○	○
DEMOD OPTION	R6553, R6554	×	○	○
	B6552, B6554	○	×	×
DEMOD PWB ASS'Y	CN6701	PB11087E	LPA10094 -13*	LPA10094 -14*

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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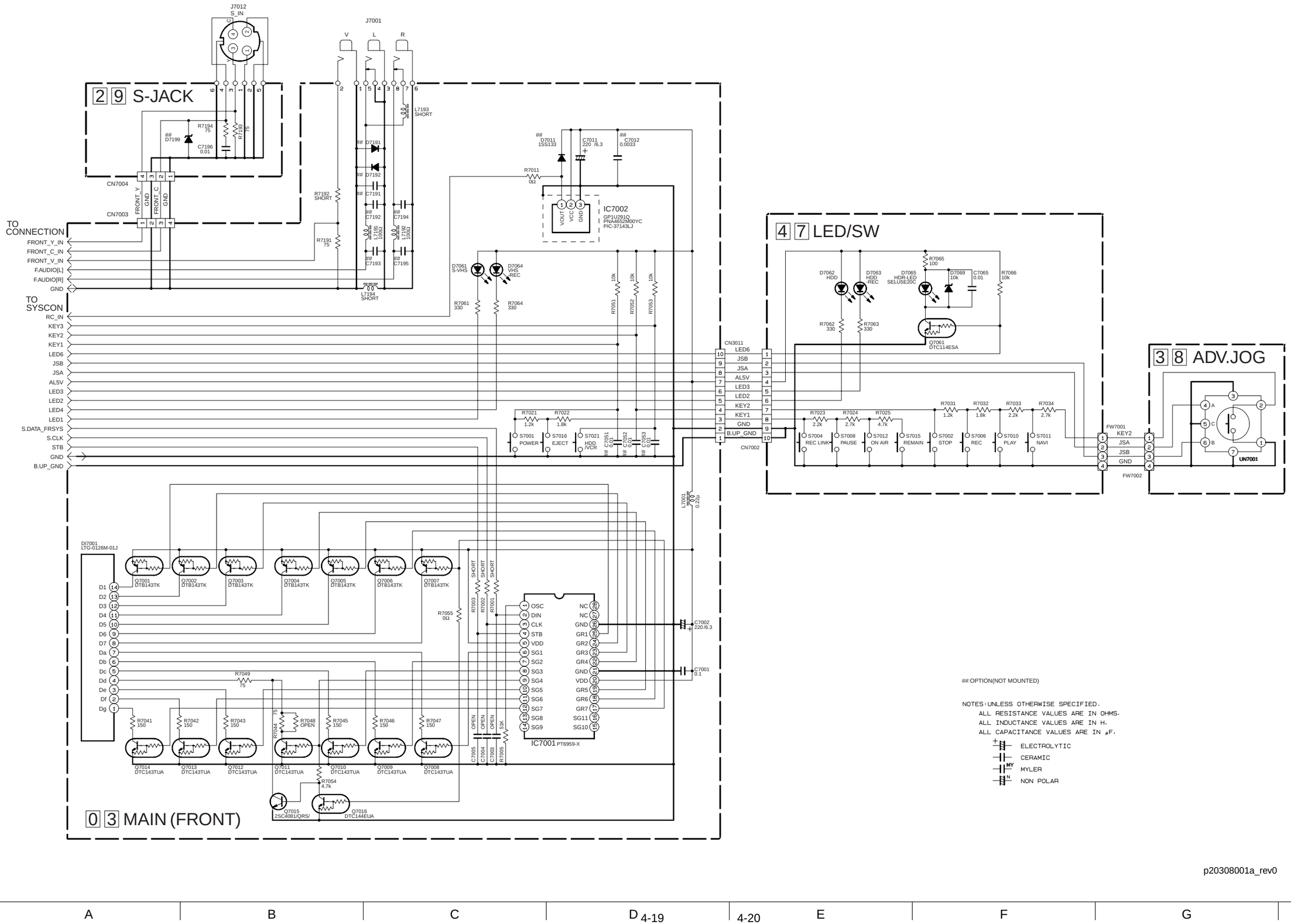
4.9 MAIN (FRONT), S-JACK, ADV. JOG AND LED/SW SCHEMATIC DAIGRAMS



##:OPTION(NOT MOUNTED)

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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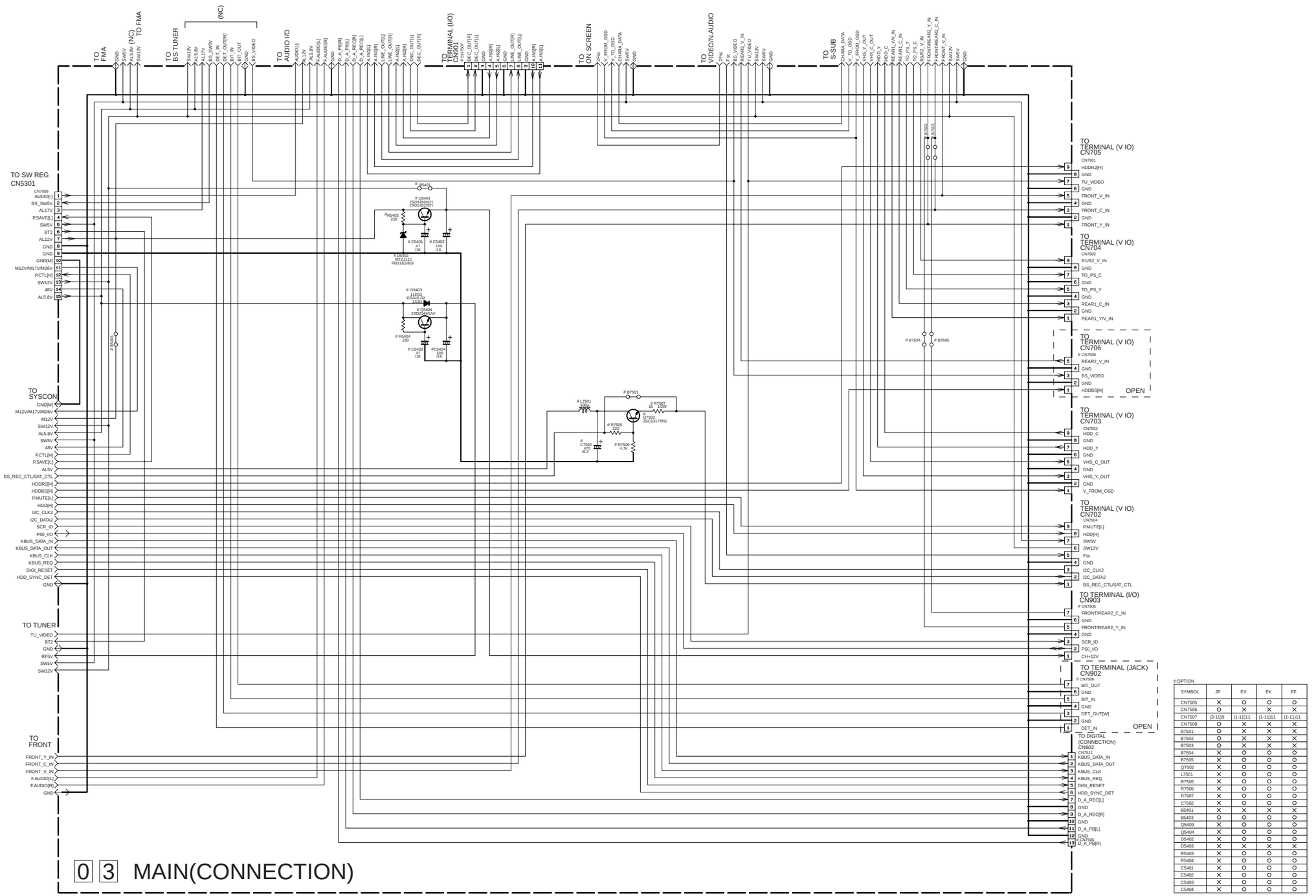
4.10 MAIN (CONNECTION) SCHEMATIC DIAGRAM



#OPTION

SYMBOL	JP	EX	EK	EF
CN7505	X	O	O	O
CN7506	O	X	X	X
CN7507	(3-11)9	(1-11)11	(1-11)11	(1-11)11
CN7508	O	X	X	X
B7501	O	X	X	X
B7502	O	X	X	X
B7503	O	X	X	X
B7504	X	O	O	O
B7505	X	O	O	O
Q7502	X	O	O	O
L7501	X	O	O	O
R7505	X	O	O	O
R7506	X	O	O	O
R7507	X	O	O	O
C7502	X	O	O	O
B5401	X	X	X	X
B5403	O	O	O	O
Q5403	X	O	O	O
Q5404	X	O	O	O
D5402	X	O	O	O
D5403	X	X	X	X
R5403	X	O	O	O
R5404	X	O	O	O
C5401	X	O	O	O
C5402	X	O	O	O
C5403	X	O	O	O
C5404	X	O	O	O

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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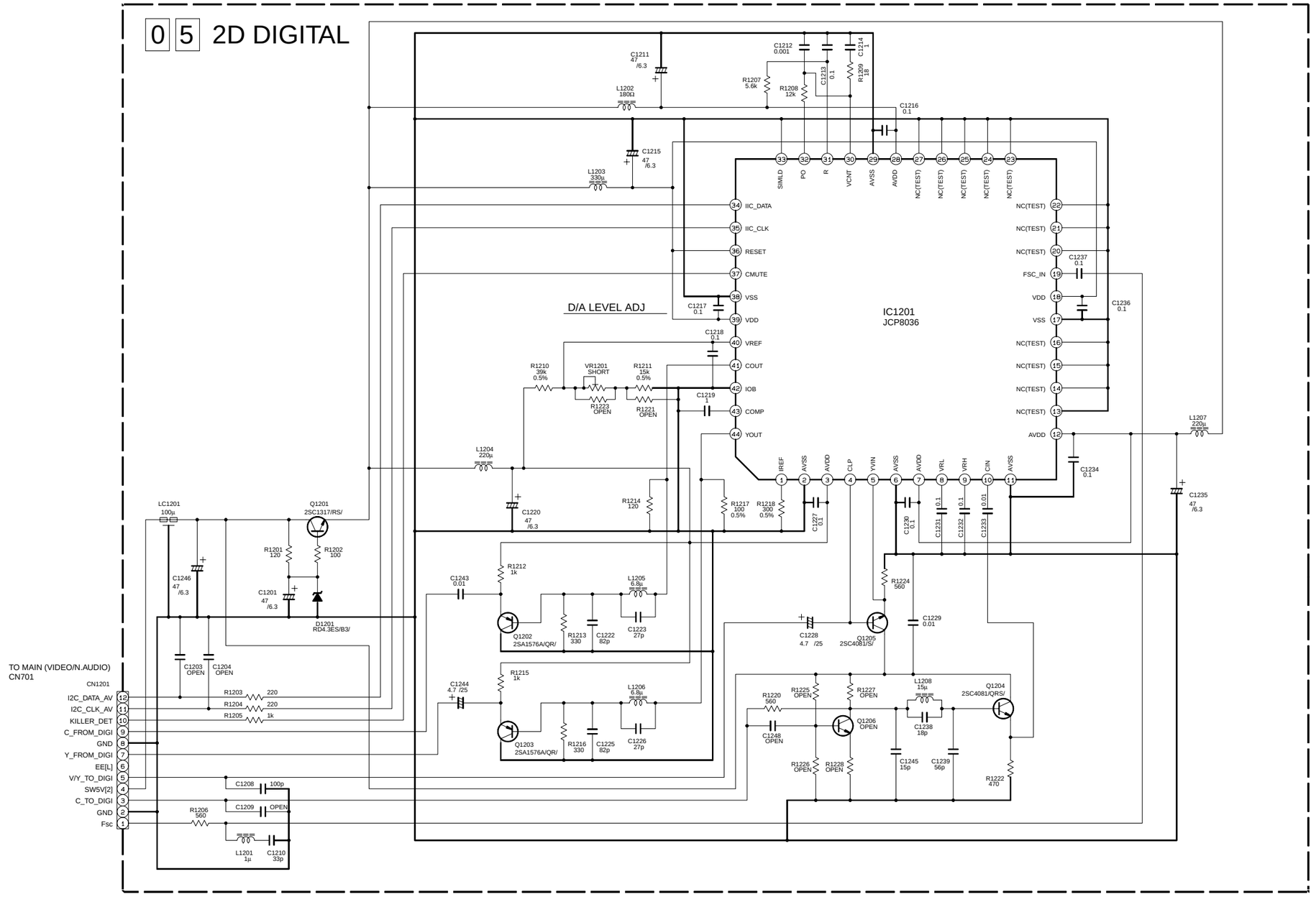
4.11 2D DIGITAL SCHEMATIC DIAGRAM



NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ALL NPN TYPE TRANSISTORS ARE 2SC4081/QRS/.
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

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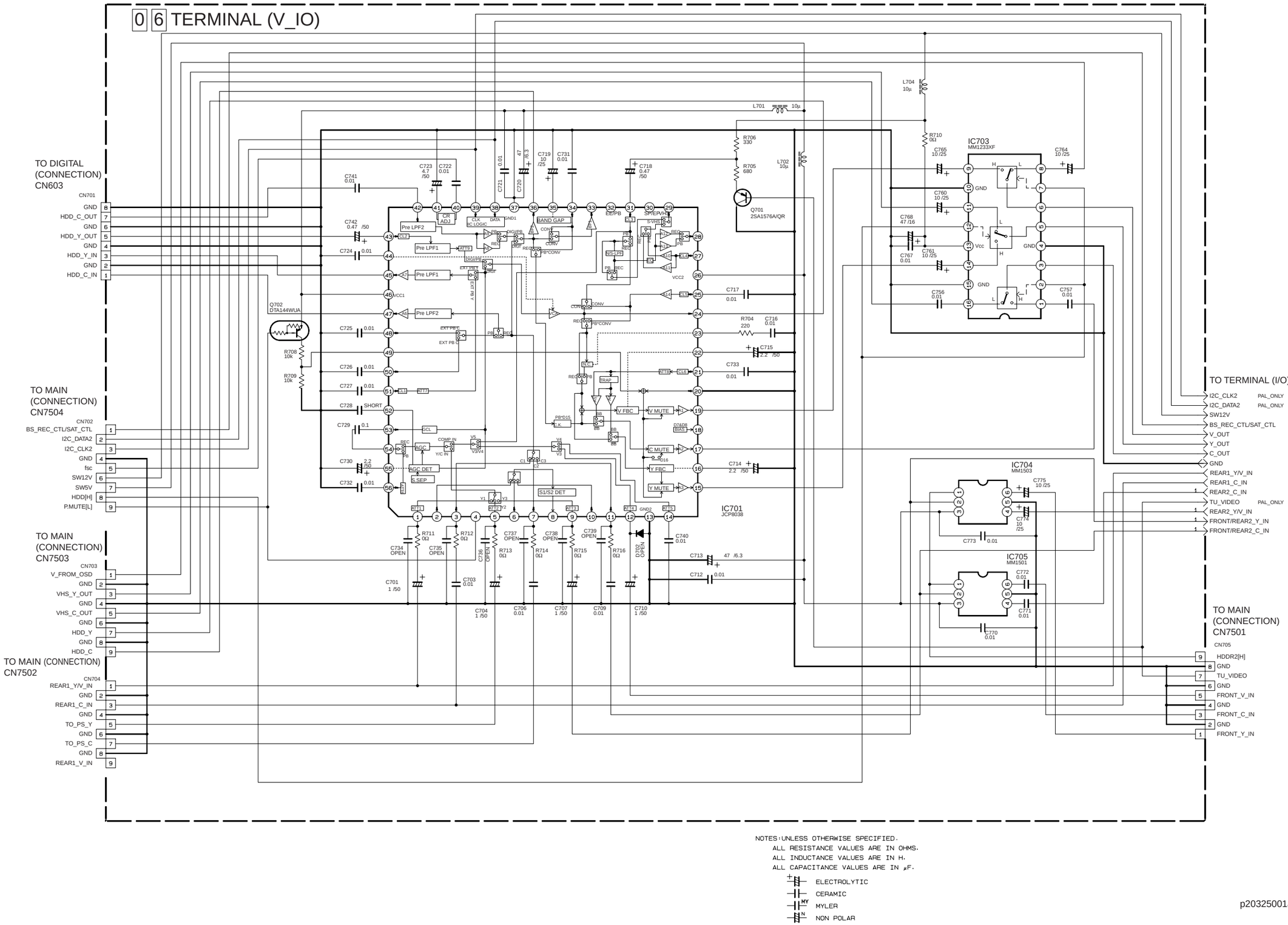
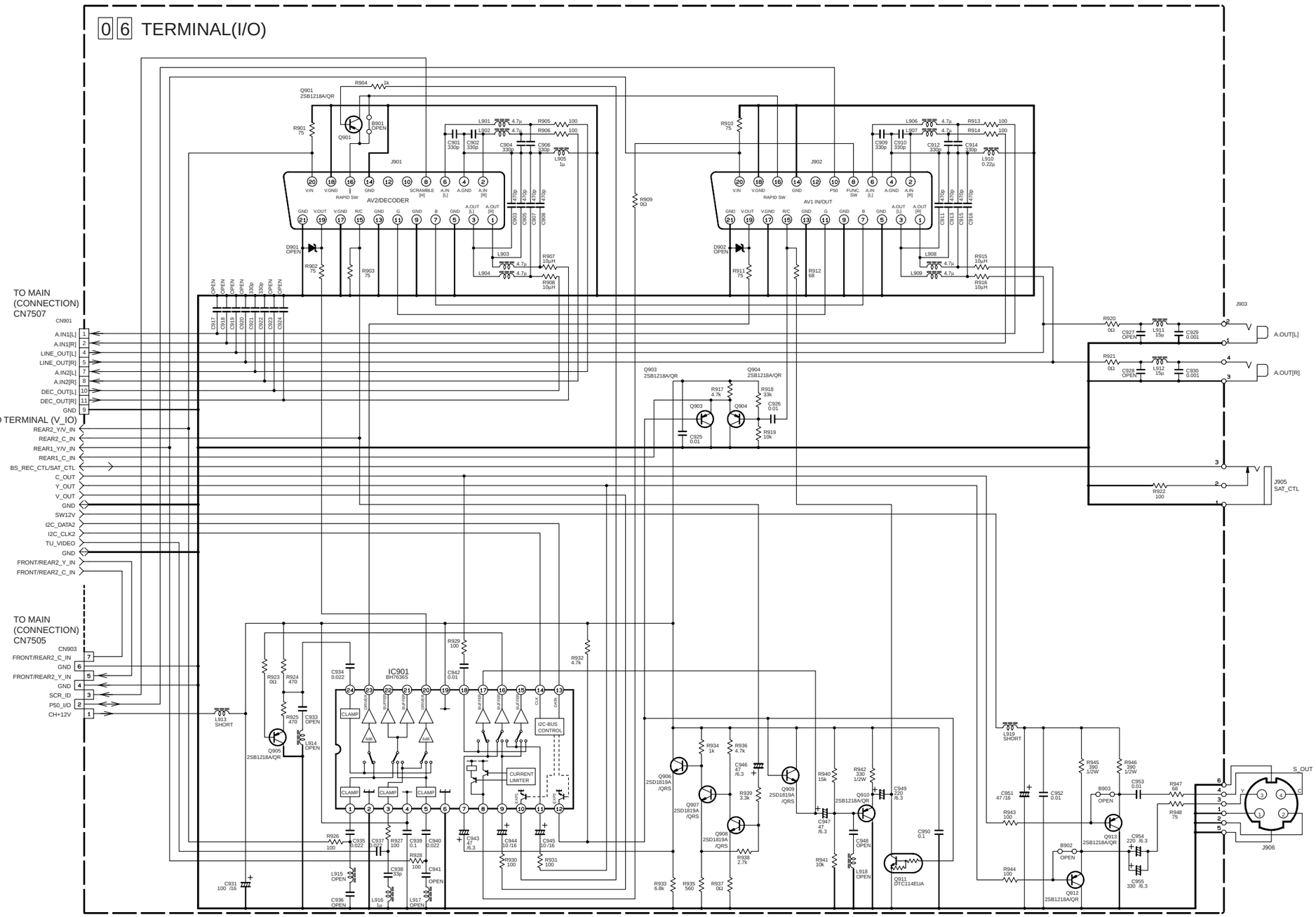
4.12 TERMINAL (V_IO) SCHEMATIC DIAGRAM



4.13 TERMINAL (I/O) SCHEMATIC DIAGRAM

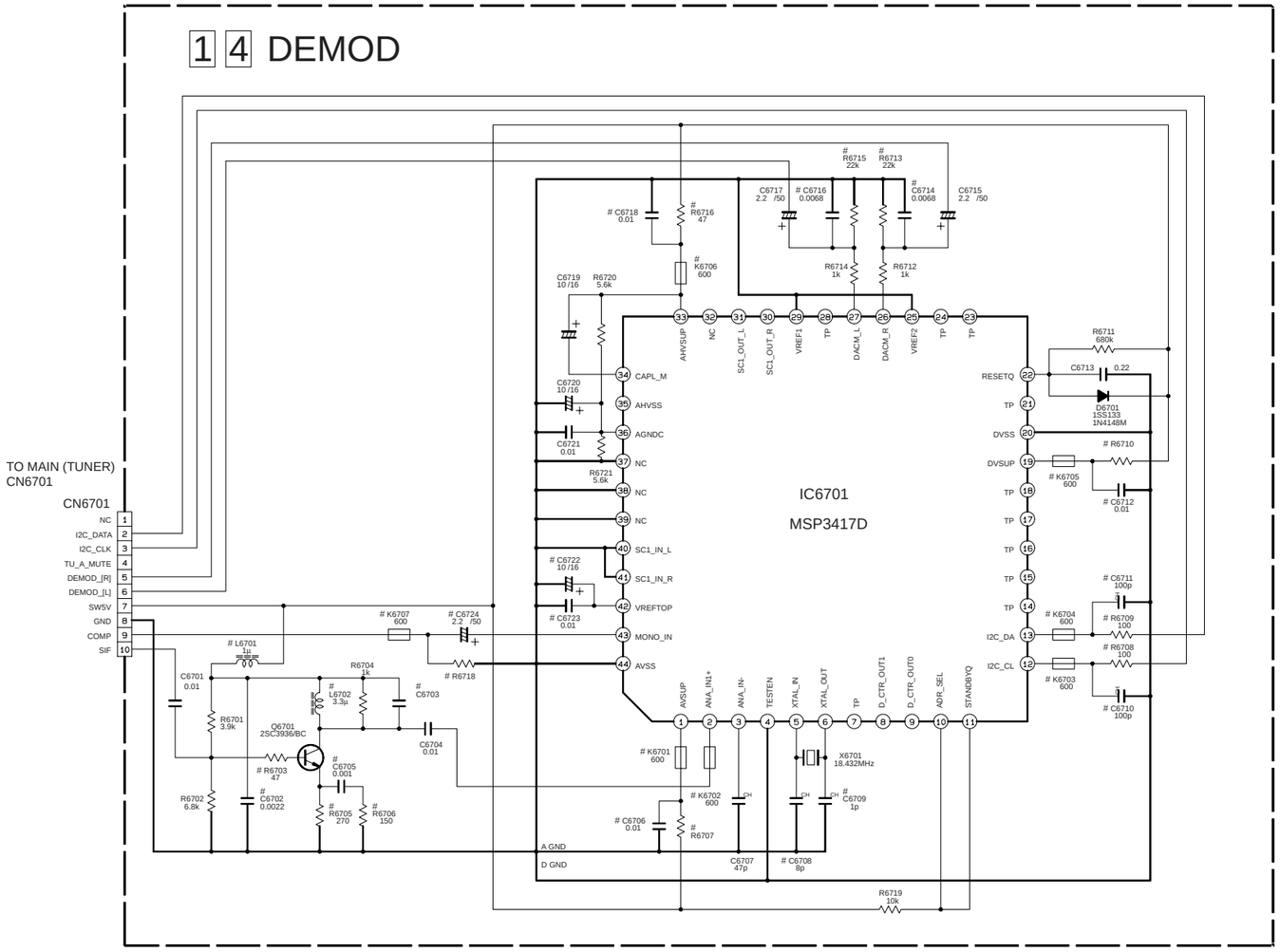


NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

p20330001a_rev0

4.14 DEMODULATOR SCHEMATIC DIAGRAM



DIFFERENCE TABLE ○ : Used × : Not used

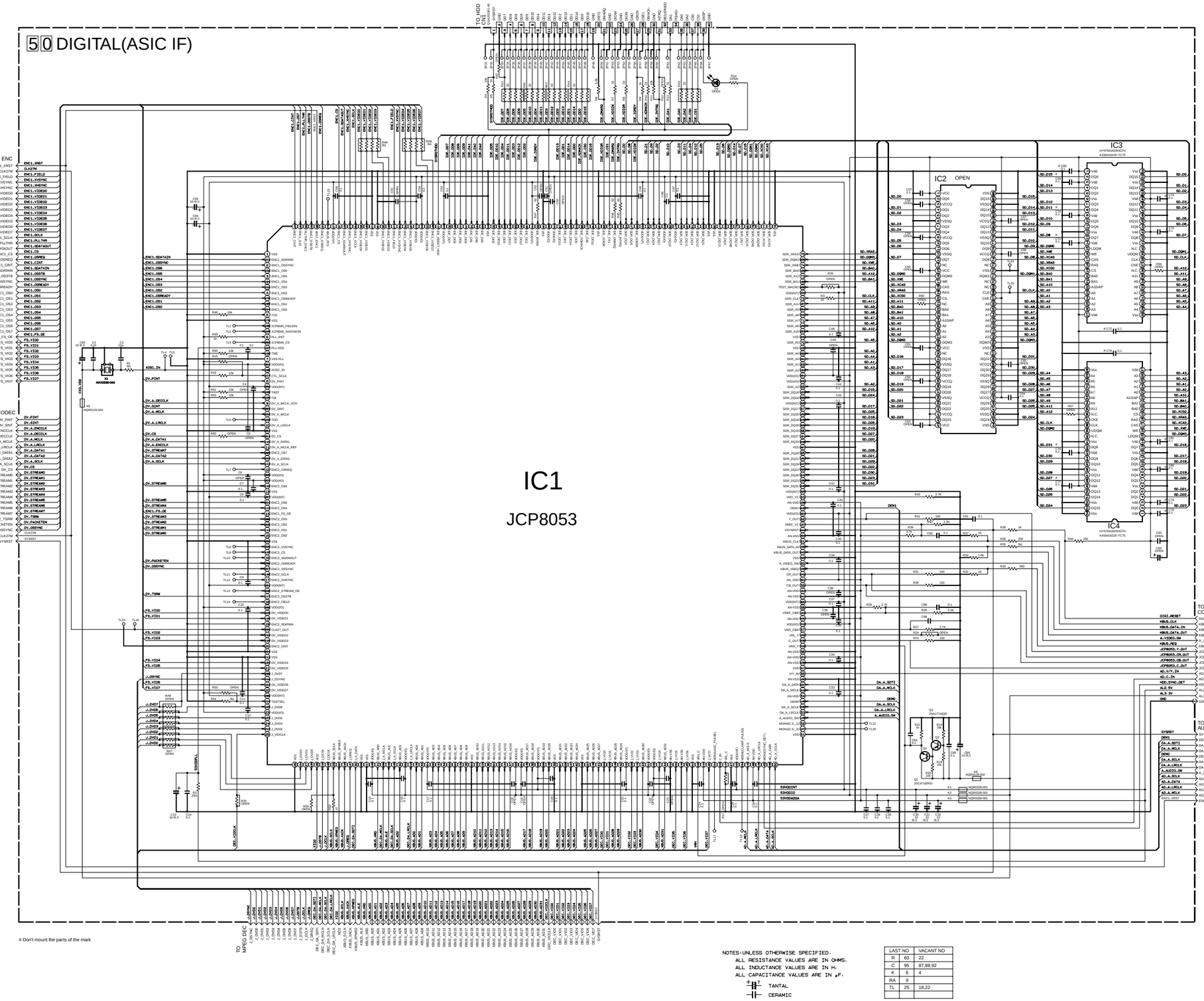
		EU/EK	MS	KR	MS	EX/EK	AA/AG		
DEMOD PWB ASSY		LPA10094-09*	LPA10094-10*	LPA10094-11*	LPA10094-12*	LPA10094-13*	LPA10094-14*		
PRE AMP	R6703	0	0	47	0	0	0		
	R6705	270	270	270	270	270	270		
	R6706	×	×	100	×	×	×		
	C6702	×	×	×	×	×	×		
	C6703	×	×	×	×	×	180p		
	C6705	×	×	0.001	×	×	×		
	L6701	SHORT	SHORT	SHORT	SHORT	SHORT	SHORT		
	L6702	×	×	3.3µ	×	×	3.3µ		
MONO IN	K6707	×	FE 600	×	FE 600	×	×		
	C6724	×	0.22/50	×	0.22/50	×	×		
	R6718	×	×	×	×	×	×		
I2C-BUS	R6708	FE 600	FE 600	FE 600	FE 600	10k	10k		
	R6709	FE 600	FE 600	FE 600	FE 600	1k	1k		
	K6703	10k	0	1k	1k	FE 600	FE 600		
	K6704	0	0	1k	1k	FE 600	FE 600		
	C6710,C6711	×	×	×	×	×	×		
ANALOG Vcc	R6707	FE 600	FE 600	FE 600	39	0	0		
	K6701	33	33	39	FE 600	FE 600	FE 600		
	C6706	×	×	×	×	×	×		
DIGITAL Vcc	R6710	FE 600	FE 600	FE 600	12	0	0		
	K6705	0	10	12	FE 600	FE 600	FE 600		
	C6712	×	×	×	×	×	×		
DAC Vcc	R6716	FE 600	FE 600	FE 600	47	47	47		
	K6706	47	47	47	FE 600	FE 600	FE 600		
	C6718	×	×	×	×	×	×		
X'TAL	C6708	7p	7p	7p	8p	7p	7p		
	C6709	3p	3p	3p	2p	3p	3p		
DAC OUT	R6713,R6715	12k	12k	×	×	○	○		
	C6714,C6716	0.0022	0.0068	0.0022	0.0068	0.0022	0.0022		
VREFTOP	C6722	×	×	×	×	×	×		
	C6723	0.01	0.01	0.001	0.01	0.01	0.01		

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

p20162001a_rev3.1

4.15 DIGITAL (ASIC IF) SCHEMATIC DIAGRAM



NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
T TANTAL
CERAMIC

LAST NO	VACANT NO
R	60	22
C	95	87,88,92
K	6	4
RA	9	
TL	25	18,22

p10465001a_rev0.1

4.16 DIGITAL (MPEG DEC) SCHEMATIC DIAGRAM

5 0 DIGITAL(MPEG DEC)

IC201
NDV8601VWA

IC207
IC202
IC203
IC204
IC205
IC206
IC208
IC209

TO ASIC IF

TO DV_CODEC

TO CONNECTION

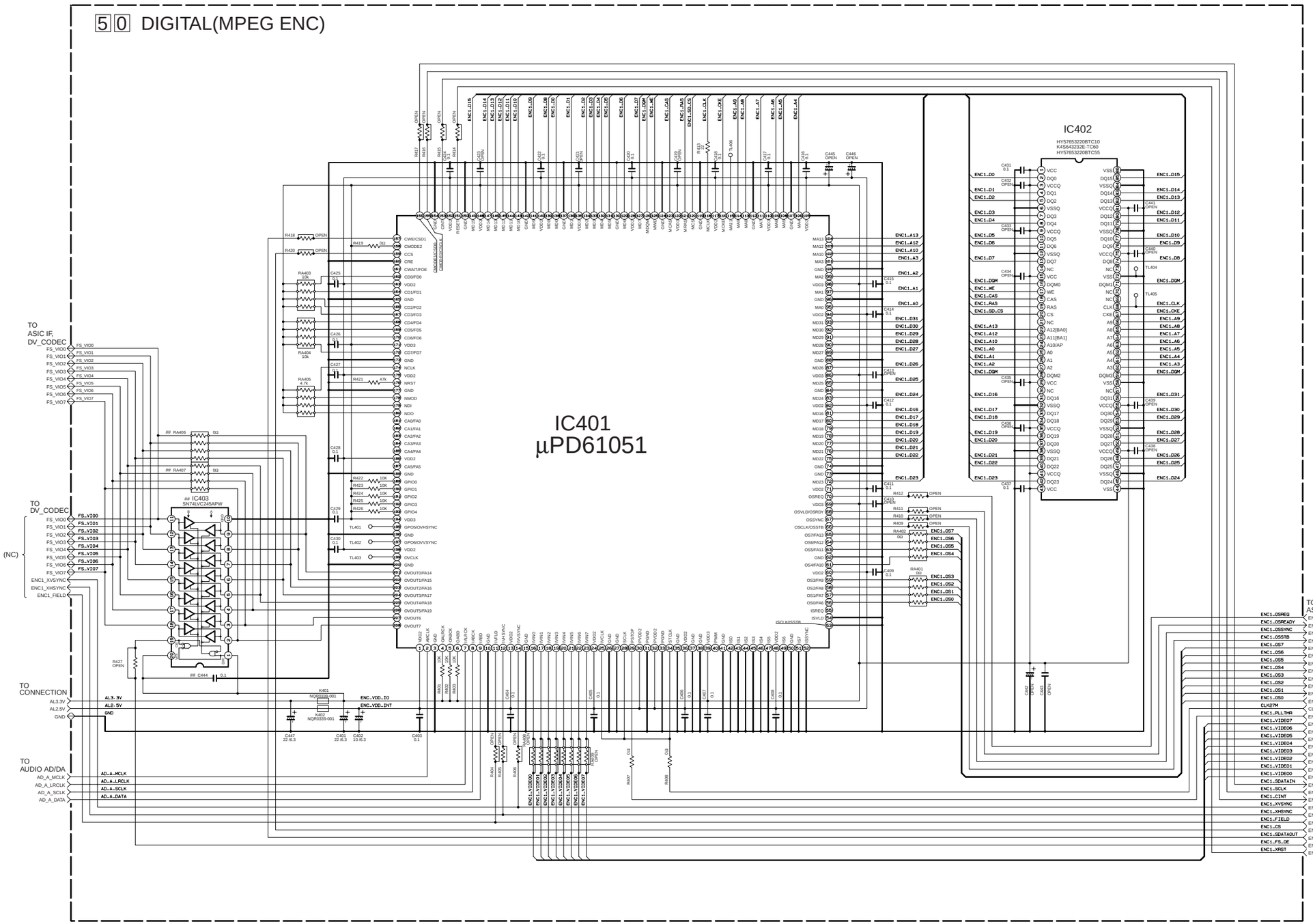
TO ASIC IF

Don't mount the parts of the mark

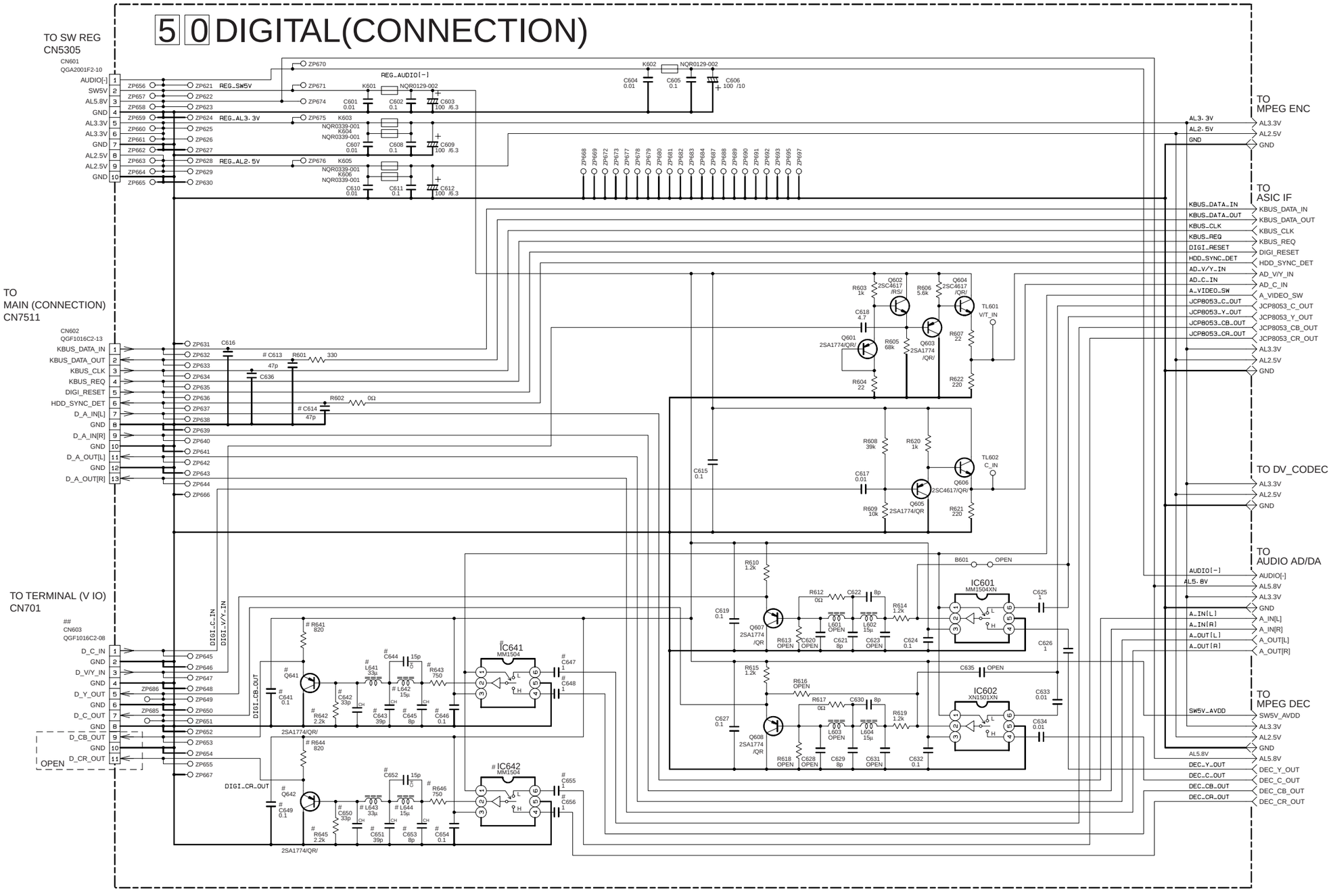
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
TANTAL
CERAMIC

LAST NO		VACANT NO
R	255	1-200, 215,221
C	284	1-200, 264-270
K	204	1-200, 203
Q	204	1-200
RA	205	1-200
TL	228	1-200, 204-206,208

p10466001a_rev0


50 DIGITAL(MPEG ENC)
IC401
μPD61051
IC402
HY57653220BTC10
K4S643232E-TC60
HY57653220BTC55
IC403
SN74LVC245APW
TO ASIC IF, DV_CODEC
TO DV_CODEC
TO CONNECTION
TO AUDIO AD/DA
TO ASIC IF
(NC)
ENC_VDD_IO
ENC_VDD_INT
AL3.3V
AL2.5V
GND
AD_A_MCLK
AD_A_LRCLK
AD_A_SCLK
AD_A_DATA
Different view
O:Used X:Not used
IC403,C444
RA406,RA407
WITH DV CODEC
WITHOUT DV CODEC
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
TANTAL
CERAMIC
LAST NO
VACANT NO
R 427 1-400
C 447 1-400
K 402 1-400
RA 409 1-400
TL 406 1-400
p10467001a_rev0

4.18 DIGITAL (CONNECTION) SCHEMATIC DIAGRAM



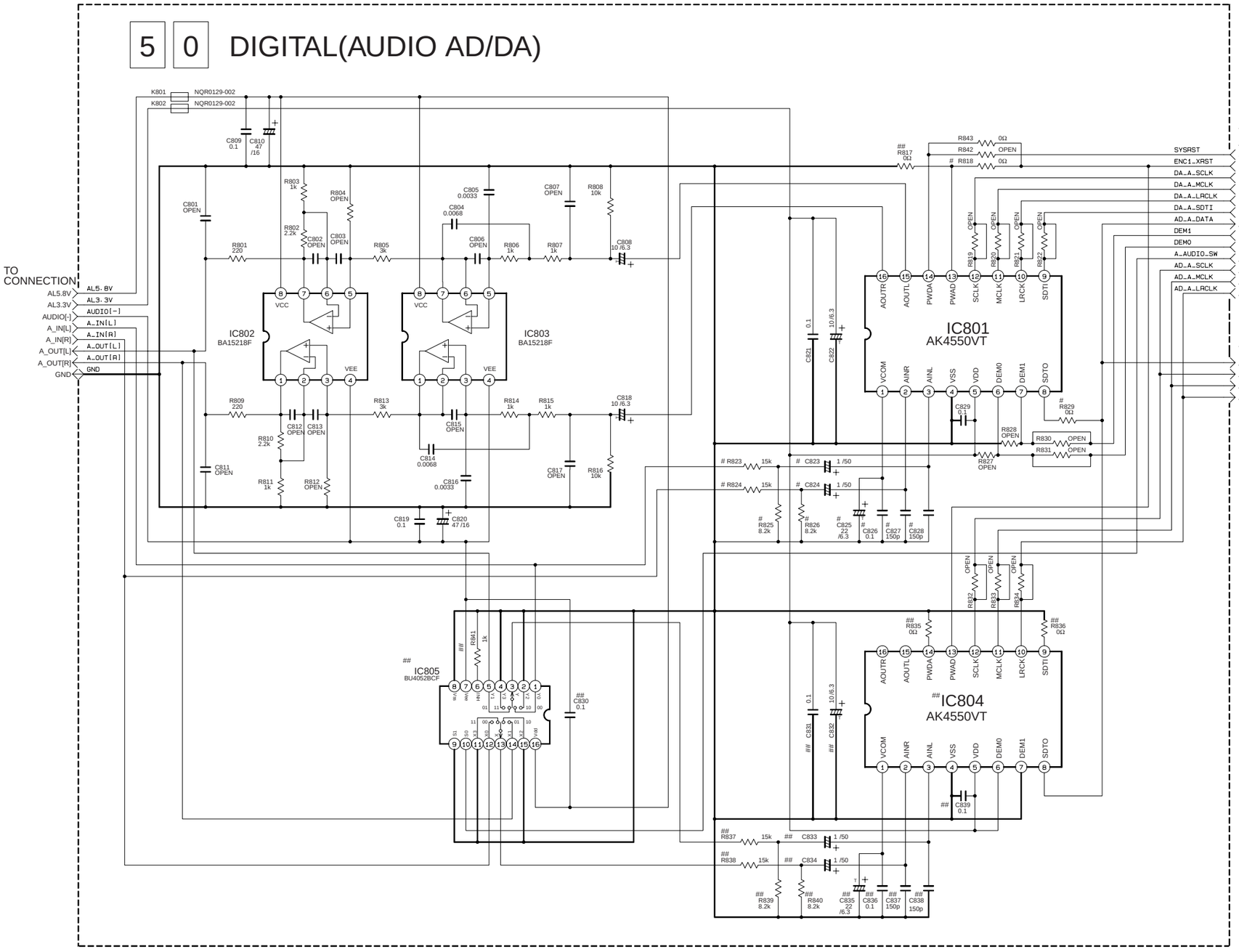
Don't mount the parts of the mark

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
TANTAL
CERAMIC

LAST NO		VACANT NO
R	646	1-600, 611,623-640
C	656	1-600, 616,636-640
L	644	1-600, 605-640
K	606	1-600
Q	642	1-600, 609-640
TL	602	1-600

p20303001a_rev0.1

4.19 DIGITAL (AUDIO AD/DA) SCHEMATIC DIAGRAM



Different view

	##	#
WITH DV INPUT	○	×
WITHOUT DV INPUT	×	○

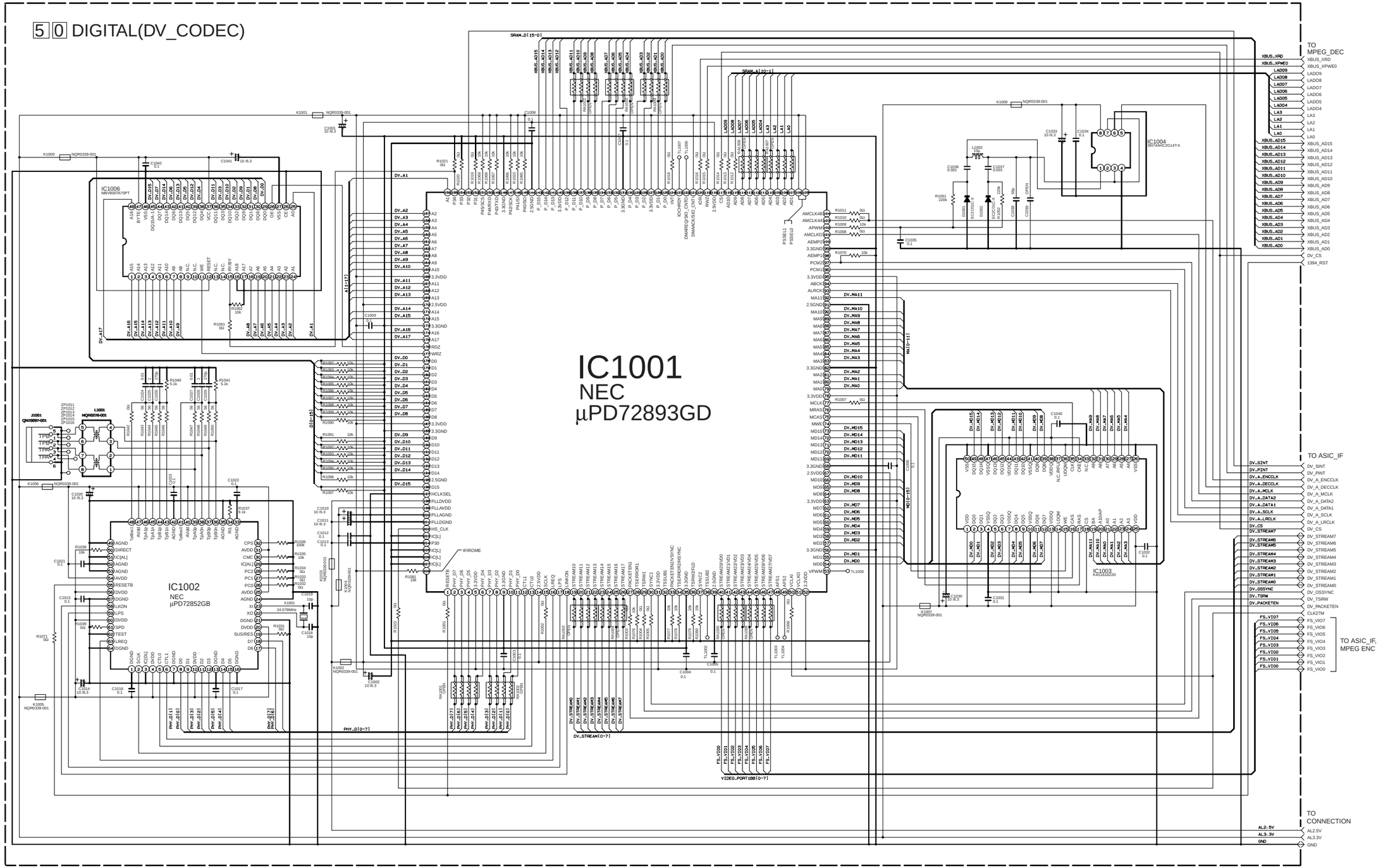
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
TANTAL
CERAMIC

LAST NO		VACANT NO
R	843	1-800
C	839	1-800
K	802	1-800

p20302001a_rev0

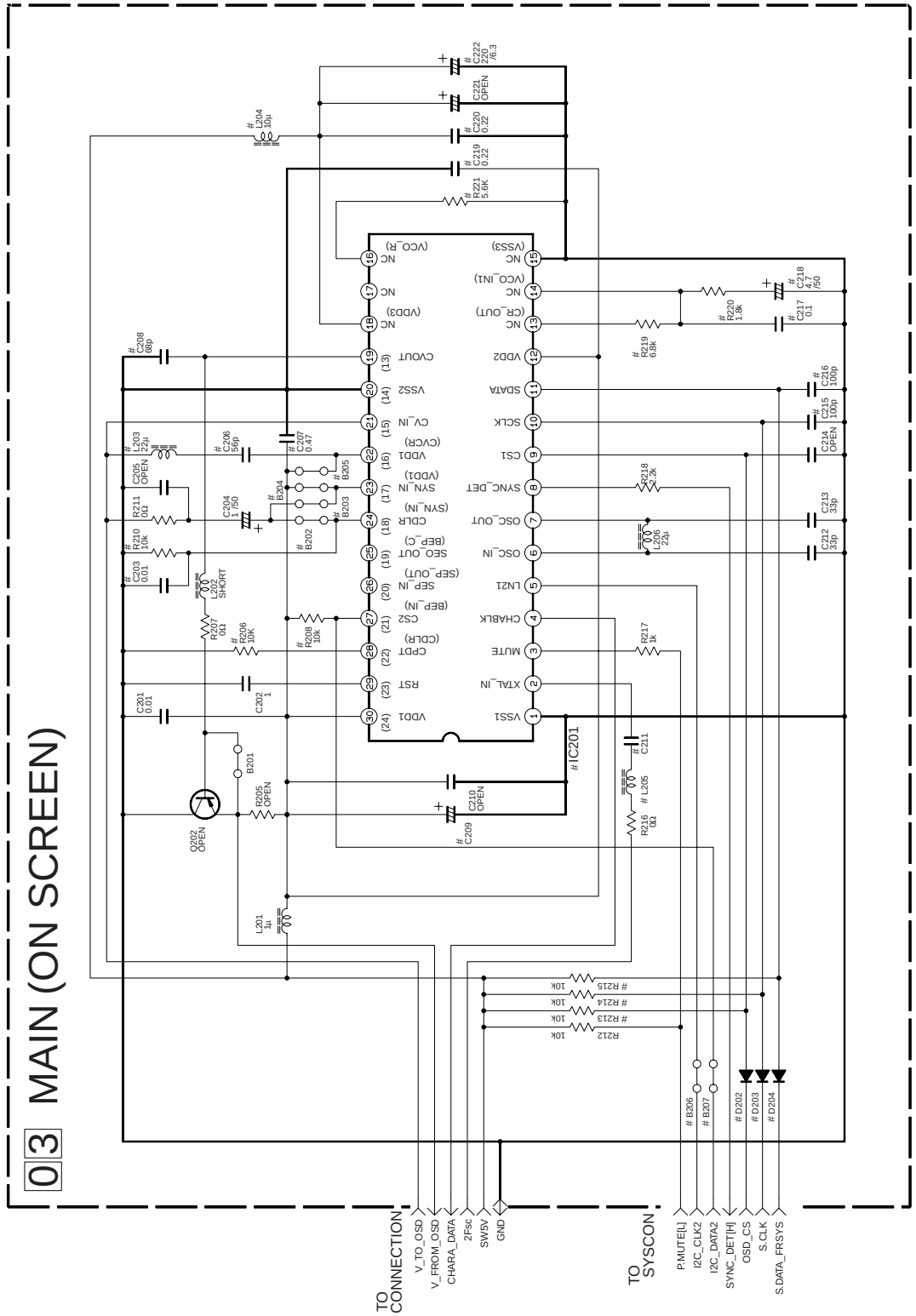
4.20 DIGITAL (DV_CODEC) SCHEMATIC DIAGRAM



NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

p10495001a_rev0



#:OPTION	IC201	R213 R206 B202 B204	R214 R215	B206 R207 L203 L204	R221 C206 C219 C220	C222 C218 C215 R220 C217 C216	R208 C208	B203 R209 C208	B205 ,R210	D202	D203 D204	C207	L205	C211	C209	
EX	LC74776-9791	O	X	O			X	X		1.5k	100	0.47	33 u	10p		230/6.3
EK	LC74776-9791	O	X	O			X	X		1.5k	100	0.47	33 u	10p		230/6.3
EF	LC74776-9791	O	X	O			X	X		1.5k	100	0.47	33 u	10p		230/6.3
JP	LC74788N-9829	O	O	X			O	X		1SS133	1SS133	0.22	SHORT	0.01		100/6.3

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10178-001B

REF.NO.	LOCATION
CAPACITOR	
C1	B C 13F
C2	B C 13F
C3	B C 13F
C4	B C 14E
C5	A D 14F
C6	A D 13F
C7	B C 15F
C8	B C 15F
C9	A D 13J
C10	B C 14H
C11	B C 15H
C12	B C 14H
C13	B C 14I
C14	B C 14H
C15	B C 14J
C16	B C 14H
C17	A D 13H
C18	A D 13J
C19	A D 13J
C20	A D 13J
C21	B C 13I
C22	A D 13J
C23	B C 13I
C24	A D 13I
C25	B C 12I
C26	B C 12I
C27	B C 11J
C28	A D 12J
C29	B C 11I
C30	B C 11J
C31	A D 12J
C32	B C 12I
C33	A D 12I
C34	B C 11I
C35	B C 11I
C36	A D 12J
C37	A D 10H
C38	A D 11H
C39	B C 11H
C40	A D 11G
C43	B C 11H
C44	B C 13F
C45	A D 11H
C51	B C 11H
C52	A D 14J
C53	B C 11I
C59	B C 12K
C60	A D 12K
C61	B C 12K
C63	B C 14J
C64	B C 11J
C65	A D 14G
C69	B C 13F
C70	B C 12F
C72	B C 10K
C73	B C 11K
C74	B C 11K
C77	B C 12K
C78	B C 11K
C80	B C 13I
C84	B C 15H
C88	B C 14I
C92	B C 13I
C97	B C 11H
C99	A D 11H
C103	B C 9K
C106	B C 14K
C108	B C 11J
C109	B C 14J
C110	B C 14K
C114	B C 10J
C120	A D 11I
C125	B C 11H
C142	B C 18J
C201	B C 14O
C202	B C 14N
C203	B C 14O
C204	A D 14O
C205	B C 13O
C206	B C 13O
C207	B C 13O
C208	B C 13N
C209	A D 15N
C210	B C 14N
C211	B C 14M
C212	B C 14N
C213	B C 13N
C214	B C 13N
C215	B C 13N
C216	B C 13N
C217	B C 12N
C218	A D 12M
C219	B C 13N
C220	B C 13N
C221	A D 13O
C222	A D 14O
C301	B C 7C
C302	B C 7C
C303	B C 7D
C304	B C 7D
C305	B C 8D
C306	B C 7C
C307	B C 8C
C308	B C 8D
C309	B C 8D
C310	B C 8C
C311	B C 8D
C312	B C 8E
C313	B C 8D
C314	B C 8D
C315	B C 8D
C316	B C 8D
C317	B C 8D
C318	B C 7D
C319	B C 7D
C320	B C 7D
C321	B C 7D
C322	B C 8D
C323	A D 8B
C324	B C 9B
C401	B C 14D
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C405	B C 14D
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C407	B C 13D
C409	A D 14D
C501	A D 19M
C502	A D 19M
C503	A D 19M
C504	B C 19M
C505	A D 19L
C506	B C 19L
C507	A D 19L
C508	A D 19K
C509	A D 19K
C510	A D 20K
C511	B C 20K
C512	B C 20J
C513	A D 20J
C514	B C 20K
C515	B C 20K
C516	B C 20K
C518	B C 21K
C519	A D 21L
C520	A D 21J
C521	A D 19L
C522	A D 19M
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C524	B C 18M
C525	B C 18M
C526	B C 18L
C527	B C 18M
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C530	B C 18K
C531	B C 18K
C532	B C 18L
C533	B C 18K
C534	A D 18K
C535	B C 19K
C540	A D 20I
C541	A D 20J
C542	B C 19J
C551	A D 21L
C553	B C 21L
C554	A D 20M
C556	B C 21M
C557	A D 20N
C559	B C 20N
C560	A D 20N
C561	A D 20M
C562	A D 19M
C564	B C 19K
C566	B C 21K
C568	B C 21L
C569	B C 21L
C570	B C 20M
C571	B C 20M
C572	B C 20M
C573	B C 20M
C575	B C 19K
C576	B C 20M
C2001	A D 11G
C2002	A D 12G
C2003	A D 13F
C2004	B C 13F
C2005	A D 15F
C2006	B C 15F
C2007	A D 15G
C2008	A D 15G
C2009	B C 15G
C2010	B C 15G
C2011	A D 14G
C2012	A D 14H
C2013	B C 14G
C2014	B C 10H
C2016	B C 15G
C2018	B C 14G
C2051	B C 15L
C2052	A D 15K
C2053	B C 15K
C2054	A D 15J
C2055	A D 16L
C2061	A D 11A
C2062	B C 15N
C2063	B C 15N
C2064	A D 15M
C2201	A D 12C
C2202	A D 12C
C2203	A D 12D
C2204	A D 13D
C2205	A D 12D
C2206	A D 13D
C2207	B C 12D
C2208	B C 11E
C2209	A D 11F
C2210	A D 11F
C2211	A D 11F
C2212	A D 9E
C2213	B C 10E
C2214	A D 10C
C2215	A D 10C
C2216	A D 10C
C2217	B C 10C
C2220	A D 10C
C2221	B C 10C
C2222	B C 10E
C2223	B C 12D
C2224	B C 10E
C2225	B C 11C
C2226	B C 11C
C2227	A D 9D
C2228	B C 10B
C2229	B C 11C
C2230	A D 11C
C2231	A D 11C
C2232	B C 10E
C2233	B C 10E
C2251	B C 12E
C2252	B C 12E
C2253	B C 12E
C2254	A D 12E
C2255	B C 12E
C2256	B C 11E
C2257	B C 11E
C2258	B C 11F
C2259	A D 11E
C2261	B C 12E
C2262	B C 12E
C2601	B C 18G
C2602	B C 18G
C2603	B C 19G
C2604	B C 19F
C2605	A D 21H
C2606	A D 21G
C2607	A D 21G
C2608	A D 20F
C2609	A D 14C
C2610	A D 14C
C2611	A D 11P
C2612	A D 11O
C2613	A D 16H
C2614	A D 17G
C2615	A D 16G
C2616	A D 8O
C2617	A D 8O
C2618	B C 19E
C2619	B C 19E
C2623	A D 9O
C2624	A D 8P
C2625	A D 10P
C3004	B C 17P
C3007	B C 9P
C3008	B C 9A
C3010	A D 3K
C3011	A D 2K
C3012	A D 2K
C3014	A D 3I
C7193	B C 3D
C7194	B C 2D
C7195	B C 2D
C7502	A D 4C
CONNECTOR	
CN1	A D 13E
CN501	A D 20O
CN701	A D 17I
CN2001	A D 15L
CN2002	A D 12B
CN3001	A D 12N
CN3002	A D 13P
CN3011	A D 7P
CN3901	A D 3G
CN6701	A D 20C
CN7003	A D 3A
CN7501	A D 22L
CN7502	A D 22K
CN7503	A D 22I
CN7504	A D 22G
CN7505	A D 22O
CN7506	A D 22F
CN7507	A D 21H
CN7508	A D 22N
CN7509	A D 18P
CN7511	A D 11P
DIODE	
D1	A D 15D
D2	A D 15D
D4	A D 13K
D5	A D 14I
D202	A D 13M
D203	A D 13M
D204	A D 13M
D2201	A D 9C
D2251	A D 12F
D3001	A D 8I
D3002	A D 6L
D3003	A D 18O
D3004	A D 3K
D3005	A D 3K
D3008	B C 3G
D4001	B C 6H
D4002	B C 6I
D5402	A D 21P
D5403	A D 21C
D5501	A D 18N
D5502	A D 21O
D6002	A D 18A
D6201	A D 21O
D6202	A D 22E
D6203	A D 21C
D6205	A D 21E
D6207	A D 21D
D6551	A D 18D
D7011	A D 1K
D7061	A D 1H
D7064	A D 1J
D7191	B C 1C
D7192	B C 2C
IC	
IC1	B C 13G
IC201	A D 14M
IC301	A D 7D
IC501	B C 20L
IC502	A D 18M
IC540	B C 19J
IC2201	B C 11D
IC2601	B C 18G
IC2602	B C 19G
IC2603	B C 17H
IC2604	B C 17G
IC2605	B C 10O
IC2606	B C 9O
IC2607	B C 8O
IC2608	B C 20G
IC2609	B C 19H
IC2610	B C 18H
IC3001	B C 5G
IC3002	B C 6F
IC3003	B C 5C
IC3601	B C 4D
IC3651	B C 5O
IC6201	A D 21C
IC7001	B C 3P
IC7002	A D 1K
COIL	
L1	A D 12F
L2	A D 14H
L3	A D 13K
L4	A D 12J
L5	A D 10H
L11	A D 12I
L12	A D 12I
L13	A D 11J
L15	A D 13K
L18	A D 10K
L19	A D 11K
L20	A D 14I
L22	A D 13I
L24	A D 14K
L27	A D 11J
L28	A D 14K
L31	A D 18J
L201	A D 14O
L202	A D 12N
L203	A D 13O
L204	A D 13O
L205	A D 15M
L206	A D 14M
L301	A D 8B
L302	A D 8C
L303	A D 8D
L304	A D 9C
L401	A D 13D
L402	A D 14D
L501	A D 20J
L503	A D 18K
L504	A D 17K
L505	A D 19K
L2001	A D 12F
L2201	A D 10F
L2251	A D 12F
L2252	A D 11F
L4001	A D 12O
L6001	A D 16A
L6002	A D 22C
L6005	A D 20B
L6032	A D 17C
L6201	A D 21E
L6202	A D 20E
L6203	A D 21E
L6204	A D 19F
L6501	A D 17D
L7001	A D 4O
L7191	A D 2D
L7192	A D 2E
L7193	A D 2D
L7194	A D 2D
L7501	A D 4C
TRANSISTOR	
Q1	B C 13E
Q2	B C 13E
Q3	B C 14E
Q4	B C 13E
Q5	B C 10K
Q7	B C 10K
Q8	B C 11K
Q9	B C 11K
Q10	B C 10H
Q14	B C 12K
Q16	B C 14I
Q17	B C 14J
Q21	B C 11J
Q24	B C 10H
Q25	B C 10I
Q38	B C 14K
Q41	B C 10J
Q50	B C 12F
Q202	B C 13O
Q301	B C 8C
Q302	B C 7D
Q303	B C 8B
Q311	B C 7C
Q312	B C 7C
Q401	B C 13D
Q402	B C 13D
Q403	B C 13C
Q405	B C 14D
Q2001	B C 15H
Q2002	B C 15H
Q2003	B C 15H
Q2051	B C 15K
Q2052	B C 15N
Q2053	B C 16N
Q2054	B C 15L
Q2055	B C 16M
Q2061	B C 15N
Q2062	B C 15N
Q2063	B C 15O
Q2201	B C 9D
Q2202	B C 9D
Q2203	B C 9D
Q2204	B C 9C
Q2251	B C 10F
Q2252	B C 10F
Q2253	B C 10F
Q2254	B C 10E
Q2255	B C 11F
Q2601	B C 8N
Q2602	B C 8N
Q3002	A D 9P
Q3003	A D 9B
Q3004	B C 19O
Q3005	B C 3K
Q3007	B C 3F
Q3011	B C 10P
Q3012	B C 4M
Q3013	B C 11P
Q3901	B C 7F
Q4001	B C 4J
Q4002	B C 5J
Q4003	B C 4K
Q5403	A D 21P
Q5404	A D 22C
Q5501	A D 18O
Q5502	B C 19N
Q5503	B C 19N
Q5504	A D 21O
Q5505	B C 20P
Q5506	B C 20P
Q5507	B C 20O
Q5508	A D 20P
Q6030	B C 17C
Q6031	B C 18C
Q6032	B C 19C
Q6501	B C 19C
Q6502	B C 19C
Q6551	A D 17D
Q7001	B C 2P
Q7002	B C 2P
Q7003	B C 2O
Q7004	B C 2O
Q7005	B C 2O
Q7006	B C 2O
Q7007	B C 2N
Q7008	B C 2N
Q7009	B C 2N
Q7010	B C 2M
Q7011	B C 2M
Q7012	B C 2M
Q7013	B C 2M
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4.22 MAIN CIRCUIT BOARD

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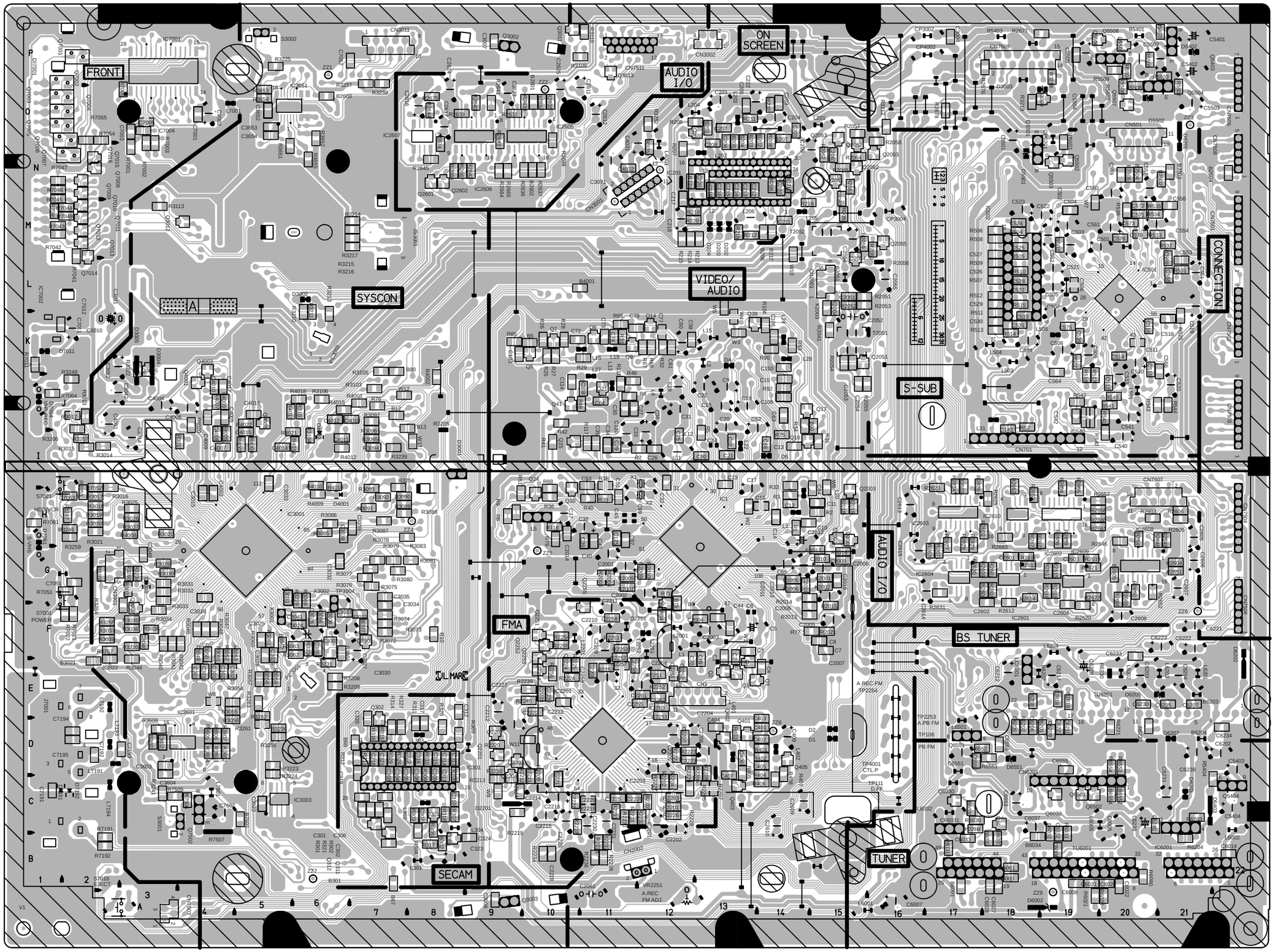
LPB10178-001B



4.23 SW REG & 2D DIGTIAL CIRCUIT BOARDS

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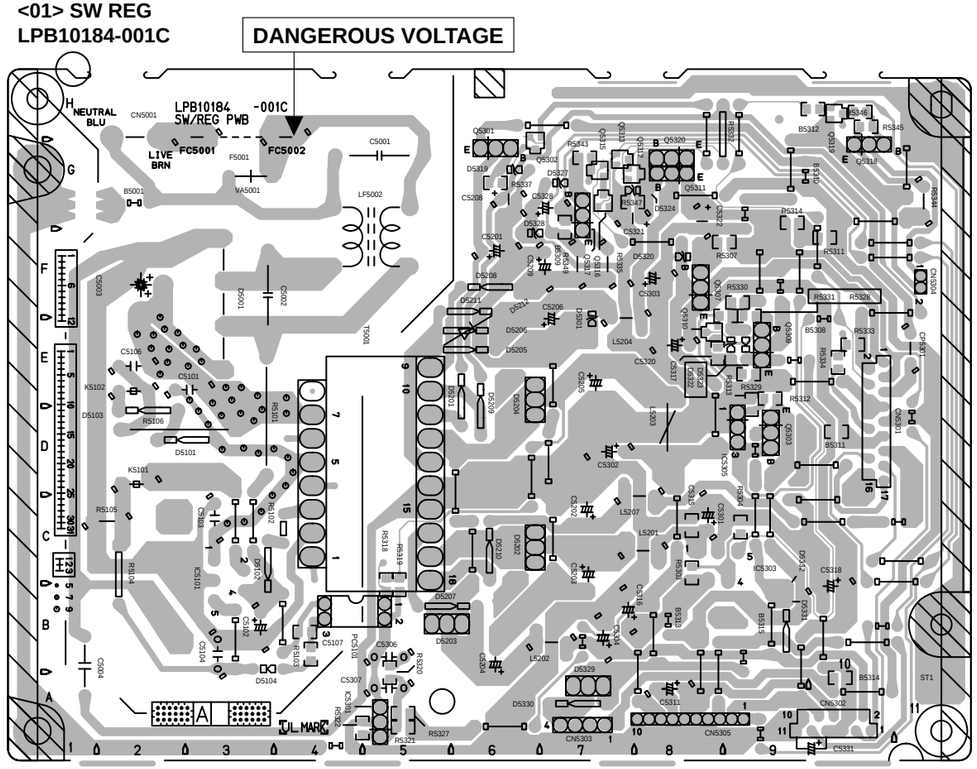

COMPONENT PARTS LOCATION GUIDE
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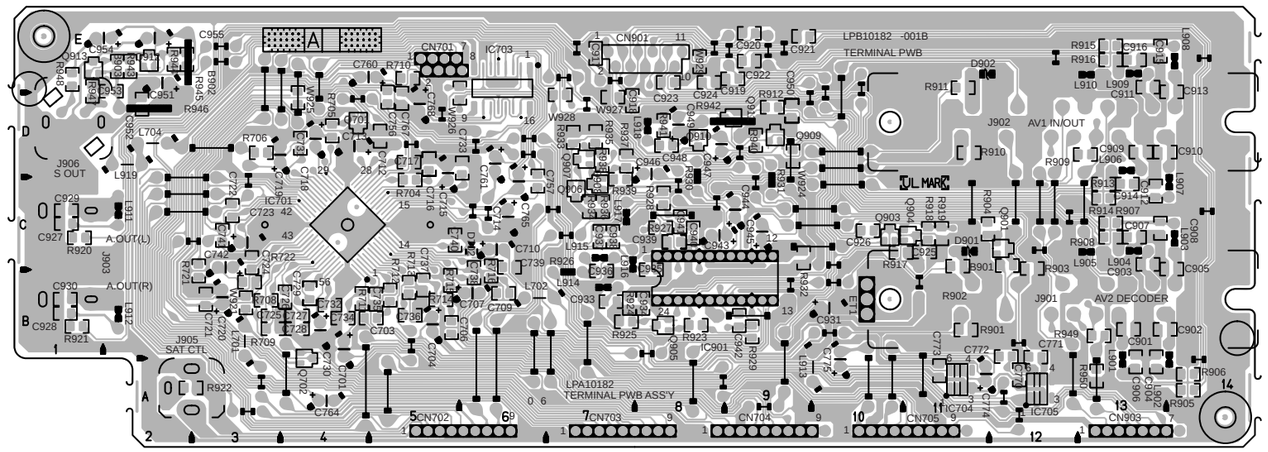
C5001	A D 5G	C5208	A D 6G	C5328	A D 6G	D5104	A D 4B	D5322	A D 9E	**COIL**		Q5313	B C 7G	R5304	B C 9C	R5332	A D 9G	B5310	A D 10G
C5002	A D 3E	C5209	A D 7F	C5331	A D 10A	D5201	A D 6D	D5323	A D 9E	L5201	A D 8C	Q5315	B C 7G	R5307	B C 9F	R5333	B C 10E	B5311	B C 10D
C5003	A D 2F	C5301	A D 8C			D5202	A D 6C	D5324	A D 7G	L5202	A D 7B	Q5316	B C 7G	R5311	B C 10F	R5334	B C 10E	B5312	B C 10H
C5004	A D 1A	C5302	A D 7D	**CONNECTOR**		D5203	A D 5B	D5327	A D 7G	L5203	A D 8D	Q5317	A D 7F	R5312	B C 9E	R5335	A D 7F	B5313	A D 8B
C5101	A D 3E	C5303	A D 8F	CN5001	A D 2H	D5204	A D 6D	D5328	A D 7F	L5204	A D 7E	Q5318	A D 10G	R5313	B C 9E	R5337	B C 6G	B5314	B C 10A
C5102	A D 3B	C5304	A D 7B	CN5301	A D 10E	D5205	A D 5E	D5329	A D 7A	L5207	A D 7C	Q5319	B C 10H	R5314	B C 9G	R5343	B C 7G	B5315	A D 9B
C5103	A D 3C	C5306	A D 5B	CN5302	A D 10A	D5206	A D 5E	D5330	A D 7A			Q5320	A D 8G	R5318	B C 5B	R5344	A D 11G	CP5301	A D 11E
C5104	A D 3B	C5307	A D 5A	CN5303	A D 7A	D5207	A D 5B	D5331	A D 9B	**TRANSISTOR**				R5319	B C 5B	R5345	B C 10H	F5001	A D 4H
C5106	A D 2E	C5311	A D 8A	CN5304	A D 11F	D5208	A D 6F	D5332	A D 9B	Q5301	A D 6G			R5320	B C 5A	R5346	B C 10H	K5101	A D 2D
C5107	B C 4B	C5315	B C 8C	CN5305	A D 9A	D5209	A D 6D			Q5302	B C 6G			R5321	B C 5A	R5347	B C 8G	K5102	A D 2E
C5201	A D 6F	C5316	A D 8B			D5210	A D 6C	**IC**		Q5303	A D 9D			R5322	B C 5A	R5349	A D 7F	LF5002	A D 4F
C5202	A D 7C	C5317	B C 9E	**DIODE**		D5211	A D 5F	IC5101	A D 3C	Q5307	A D 8F			R5327	B C 5A			PC5101	A D 5B
C5203	A D 7C	C5318	A D 10B	D5001	A D 3E	D5212	A D 5E	IC5301	A D 5A	Q5309	A D 9E			R5328	B C 9F	**OTHERS**		T5001	A D 4C
C5204	A D 6A	C5320	A D 8E	D5101	A D 3D	D5301	A D 7E	IC5303	A D 8C	Q5310	B C 8E			R5329	B C 9E	B5001	A D 2G	VA5001	A D 3G
C5205	A D 7E	C5321	A D 8G	D5102	A D 3C	D5319	A D 6G	IC5305	A D 9D	Q5311	A D 8G			R5106	A D 2D	R5330	B C 9F	B5308	A D 10E

4.24 TERMINAL & DEMODULATOR CIRCUIT BOARDS

<06> TERMINAL
LPB10182-001B



COMPONENT PARTS LOCATION GUIDE
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CAPACITOR		C733	B C 6D	C906	B C 13A	C936	B C 7B	**DIODE**		L914	A D 7B	R710	B C 5E	R921	B C 1B	R950	B C 13A
C701	A D 4B	C734	B C 4B	C907	B C 13C	C937	B C 7C	D702	B C 6C	L915	A D 7C	R711	B C 4B	R922	B C 2A		
C703	B C 5B	C735	B C 5B	C908	B C 13C	C938	B C 7C	D901	A D 11C	L916	A D 7C	R712	B C 5B	R923	B C 8B	**OTHERS**	
C704	A D 5B	C736	B C 5B	C909	B C 13D	C939	B C 8C	D902	A D 12E	L917	A D 7C	R713	B C 5B	R924	B C 7B	B901	B C 12C
C706	B C 5B	C737	B C 5B	C910	B C 13D	C940	B C 8C			L918	A D 8D	R714	B C 5B	R925	B C 7B	B902	B C 2E
C707	A D 6B	C738	B C 6B	C911	B C 13E	C941	B C 8C	**IC**		L919	A D 2D	R715	B C 5B	R926	A D 7B	B903	B C 2E
C709	B C 6B	C739	B C 6C	C912	B C 13C	C942	B C 9B	IC701	B C 4C			R716	B C 6B	R927	B C 8C	J901	A D 12B
C710	A D 6C	C740	B C 5C	C913	B C 14E	C943	A D 9C	IC703	B C 6E	**TRANSISTOR**		R721	B C 3B	R928	B C 8C	J902	A D 12D
C712	B C 5D	C741	B C 3C	C914	B C 13C	C944	A D 9C	IC704	B C 11A	Q701	B C 4D	R722	B C 3B	R929	B C 9B	J903	A D 1C
C713	A D 4D	C742	A D 3C	C915	B C 13E	C945	A D 9C	IC705	B C 12A	Q702	B C 4B	R901	B C 11B	R930	A D 8D	J905	A D 3A
C714	A D 6C	C756	B C 5D	C916	B C 13E	C946	A D 8D	IC901	A D 8C	Q901	B C 12C	R902	B C 11C	R931	A D 9D	J906	A D 1D
C715	A D 5D	C757	B C 6D	C917	B C 7E	C947	A D 8D			Q903	B C 10C	R903	B C 12C	R932	B C 9C		
C716	B C 5D	C760	A D 5E	C918	B C 7D	C948	B C 8D	**COIL**		Q904	B C 11C	R904	B C 11C	R933	B C 7D		
C717	B C 5D	C761	A D 6D	C919	B C 9E	C949	A D 8D	L701	A D 3B	Q905	B C 8B	R905	B C 14A	R934	B C 7C		
C718	A D 4D	C764	A D 4A	C920	B C 9E	C950	B C 9D	L702	A D 7B	Q906	B C 7C	R906	B C 14A	R935	B C 7D		
C719	A D 4D	C765	A D 6D	C921	B C 9E	C951	A D 2E	L704	A D 2D	Q907	B C 7D	R907	B C 13C	R936	B C 7C		
C720	A D 3B	C767	B C 5D	C922	B C 9E	C952	B C 2D	L901	A D 13B	Q908	B C 7C	R908	B C 13C	R937	B C 7D		
C721	B C 3B	C768	A D 5D	C923	B C 8E	C953	B C 2E	L902	A D 14B	Q909	B C 9D	R909	B C 13D	R938	B C 7D		
C722	B C 3C	C770	B C 12A	C924	B C 8E	C954	A D 2E	L903	A D 14C	Q910	B C 8D	R910	B C 11D	R939	B C 7D		
C723	A D 3C	C771	B C 12B	C925	B C 11C	C955	A D 2E	L904	A D 13C	Q911	B C 9D	R911	B C 11E	R940	B C 9D		
C724	B C 3C	C772	B C 12B	C926	B C 10C			L905	A D 13C	Q912	B C 2E	R912	B C 9D	R941	B C 8D		
C725	B C 3B	C773	B C 11A	C927	B C 1C	**CONNECTOR**		L906	A D 13D	Q913	B C 1E	R913	B C 13C	R942	A D 9D		
C726	B C 4B	C774	A D 11A	C928	B C 1B	CN701	A D 5E	L907	A D 14D			R914	B C 13C	R943	B C 2E		
C727	B C 4B	C775	A D 10A	C929	B C 1C	CN702	A D 5A	L908	A D 14E	**RESISTOR**		R915	B C 13E	R944	B C 2E		
C728	B C 4B	C901	B C 13B	C930	B C 1B	CN703	A D 7A	L909	A D 13E	R704	B C 5D	R916	B C 13E	R945	A D 2E		
C729	B C 4B	C902	B C 13B	C931	A D 10B	CN704	A D 8A	L910	A D 13E	R705	B C 4D	R917	B C 11C	R946	A D 2D		
C730	A D 4B	C903	B C 13C	C933	B C 7B	CN705	A D 10A	L911	A D 2C	R706	B C 3D	R918	B C 11C	R947	B C 1E		
C731	B C 4D	C904	B C 13A	C934	B C 8B	CN901	A D 7E	L912	A D 2B	R708	B C 3B	R919	B C 11C	R948	B C 1E		
C732	B C 4B	C905	B C 14C	C935	B C 8C	CN903	A D 13A	L913	A D 10A	R709	B C 3B	R920	B C 1C	R949	B C 13B		

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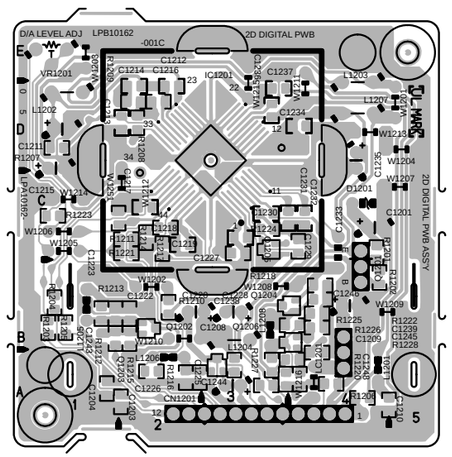

COMPONENT PARTS LOCATION GUIDE
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C1201	A D 4C	C1238	B C 3B	Q1204	B C 3B	R1228	B C 4B
C1203	B C 2A	C1239	B C 4B	Q1205	B C 3C		
C1204	B C 1A	C1243	B C 2B	Q1206	B C 3B	**OTHER**	
C1208	B C 3A	C1244	A D 3A			LC1201	A D 4A
C1209	B C 4A	C1245	B C 4B	**RESISTOR**		VR1201	A D 1E
C1210	B C 5A	C1246	A D 4B	R1201	B C 4C		
C1211	A D 1D	C1248	B C 4A	R1202	B C 4B		
C1212	B C 2D			R1203	B C 1B		
C1213	B C 2D	**CONNECTOR**		R1204	B C 1B		
C1214	B C 2D	CN1201	A D 4A	R1205	B C 1B		
C1215	A D 1C			R1206	B C 4A		
C1216	B C 2D	**DIODE**		R1207	B C 1D		
C1217	B C 2C	D1201	A D 4C	R1208	B C 2D		
C1218	B C 2C			R1209	B C 2D		
C1219	B C 2C	**IC**		R1210	B C 2B		
C1220	A D 3B	IC1201	B C 3D	R1211	B C 2C		
C1222	B C 2B			R1212	B C 2B		
C1223	B C 1B	**COIL**		R1213	B C 2B		
C1225	B C 2A	L1201	A D 4B	R1214	B C 2C		
C1226	B C 2A	L1202	A D 1D	R1215	B C 3A		
C1227	B C 3C	L1203	A D 4D	R1216	B C 2A		
C1228	A D 3B	L1204	A D 3B	R1217	B C 2C		
C1229	B C 4C	L1205	A D 1B	R1218	B C 3C		
C1230	B C 3C	L1206	A D 2A	R1220	B C 3A		
C1231	B C 3C	L1207	A D 4D	R1221	B C 2C		
C1232	B C 4C	L1208	A D 3B	R1222	B C 4B		
C1233	A D 4C			R1223	B C 1C		
C1234	B C 4D	**TRANSISTOR**		R1224	B C 3C		
C1235	A D 4D	Q1201	A D 4C	R1225	B C 3A		
C1236	B C 3D	Q1202	B C 2B	R1226	B C 4B		

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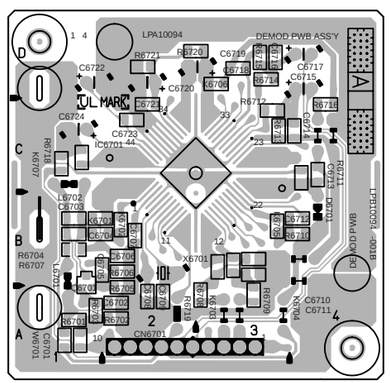
LPB10094-001C



COMPONENT PARTS LOCATION GUIDE
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C1502	A D 3D	**CONNECTOR**		R1511	A D 3A
C1503	A D 4D	CN1501	A D 3A	R1514	A D 2B
C1504	A D 4C	**IC**		R1515	A D 2C
C1505	A D 3D	IC1501	B C 2C	R1517	A D 2C
C1506	A D 3C	**TRANSISTOR**			
C1507	A D 2C	Q1501	A D 3B		
C1508	A D 1D	Q1502	A D 3B		
C1509	A D 2C	**RESISTOR**			
C1510	A D 1B	R1501	A D 4C		
C1511	A D 1A	R1502	A D 2C		
C1512	A D 2A	R1503	A D 2C		
C1513	A D 2B	R1504	A D 2B		
C1514	A D 2A	R1505	A D 2B		
C1515	A D 3B	R1506	A D 2B		
C1516	A D 3C	R1507	A D 2B		
C1517	A D 3B	R1508	A D 3B		
C1518	A D 3A				
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4.25 DIGITAL CIRCUIT BOARD

<50> DIGITAL
LPB10180-001E
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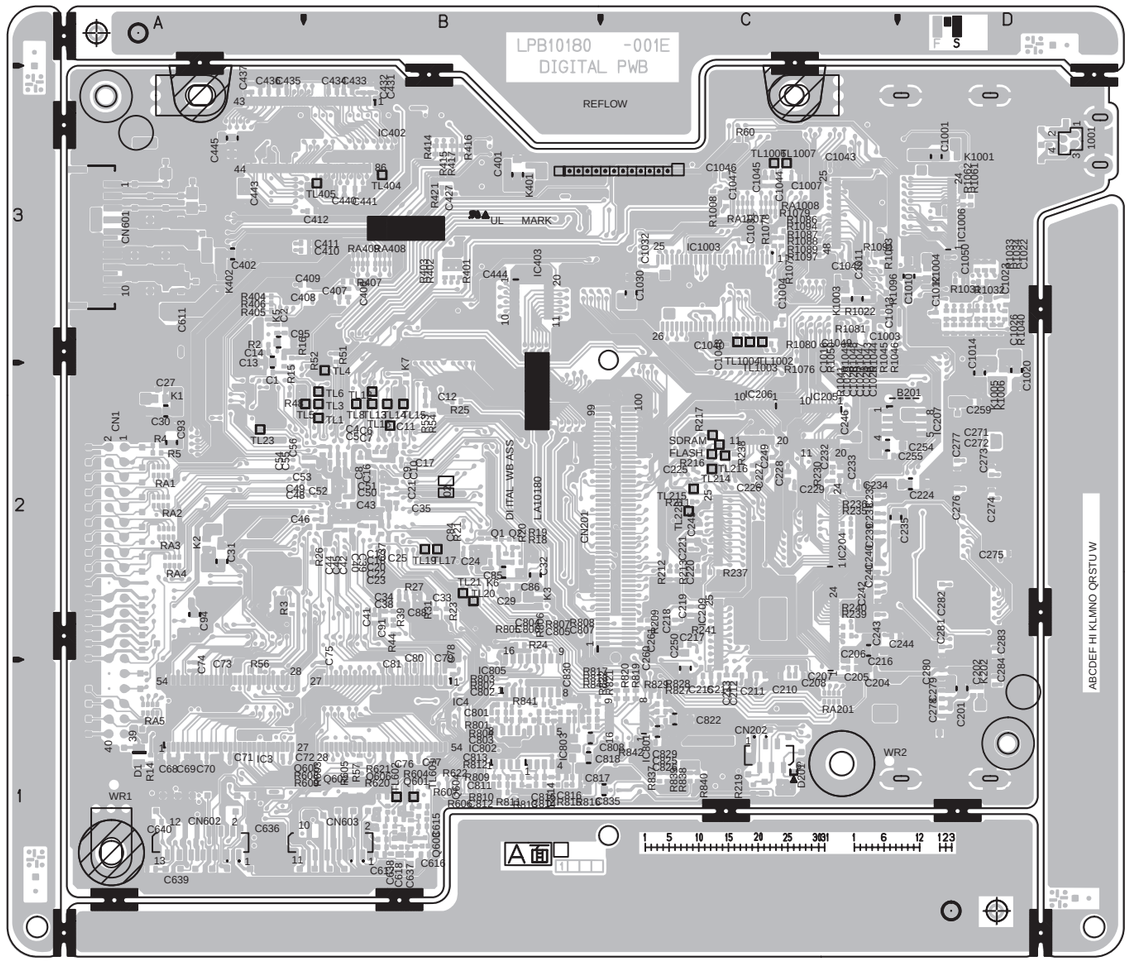

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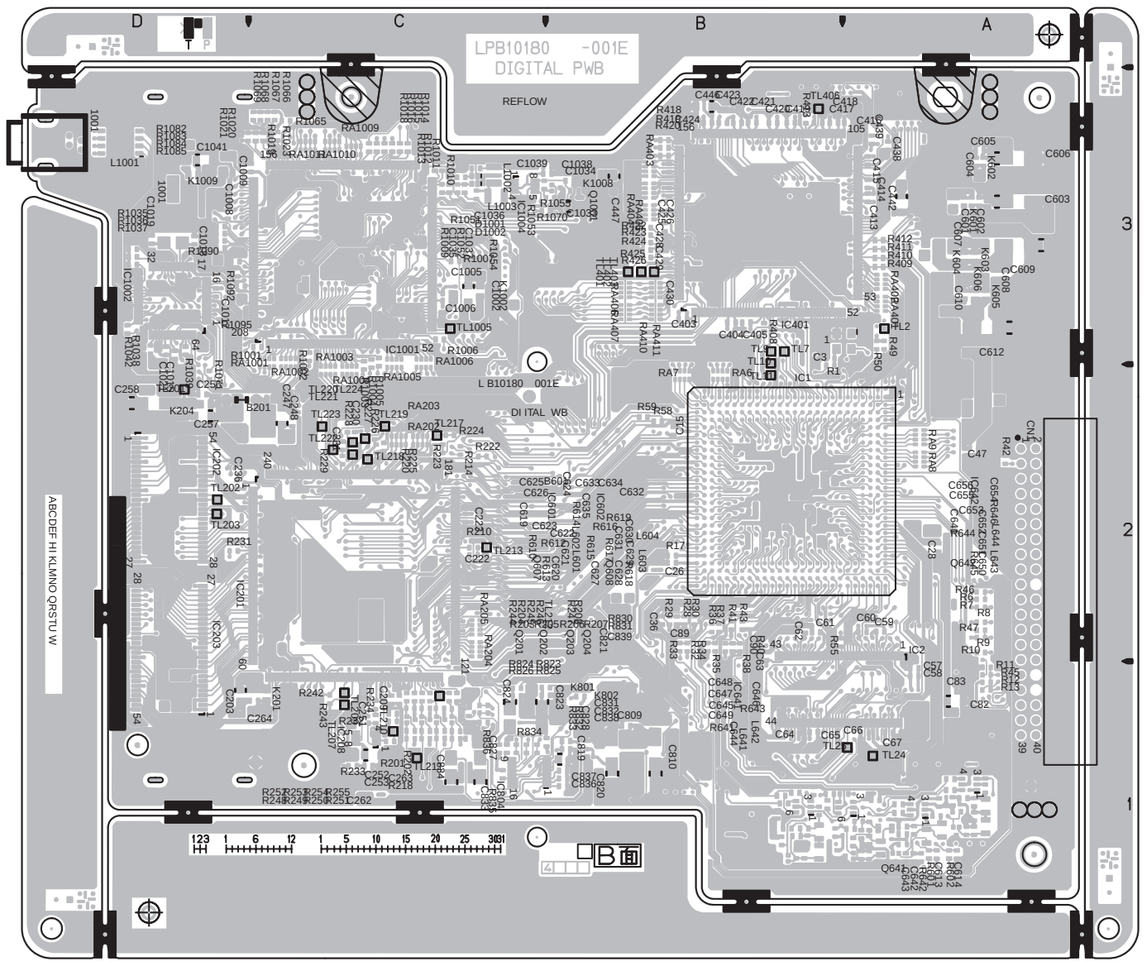

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C818	A C 1B
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CN602	A C 1A
CN603	A C 1B
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IC2	B C 1B
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IC4	A C 1B
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IC202	B C 2D
IC203	B C 2C
IC204	A C 2C
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IC207	A C 2C
IC208	B C 1C
IC209	A C 2C
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IC403	A C 3B
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IC804	B C 1C
IC805	A C 1B
IC1001	B C 3C
IC1002	B C 3C
IC1003	A C 3C
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IC1006	A C 3C
COIL	
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L602	B C 1B
L603	B C 1A
L604	B C 1A
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L642	B C 1A
L643	B C 1A
L644	B C 1A
L1001	B C 3D
L1002	B C 3C
L1003	B C 3C
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Q202	B C 1C
Q203	B C 1C
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Q602	A C 1B
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Q606	A C 2B
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Q608	B C 1A
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ESISTO	
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R11	B C 1A
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R14	A C 1A
R15	A C 3A
R16	A C 3A
R17	B C 2B
R18	A C 2B
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R20	A C 2B
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R1002	B C 3C
R1003	B C 2C
R1004	B C 3C
R1005	B C 3C
R1006	B C 3C
R1007	B C 3C
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R1055	B C 3B
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R1069	B C 3C
R1070	B C 3B
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RA9	B C 2A
RA201	A C 1C
RA202	B C 2C
RA203	B C 2C
RA204	B C 2C
RA205	B C 2C
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RA402	B C 3A
RA403	B C 3B
RA404	B C 3B
RA405	B C 3B
RA406	B C 3B
RA407	B C 3B
RA408	A C 3B
RA409	A C 3B
RA410	B C 3B
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RA1003	B C 2C
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RA1005	B C 3C
RA1006	B C 3C
RA1007	A C 3C
RA1008	A C 3C
RA1009	B C 3C
RA1010	B C 3C
RA1011	B C 3C
OT E S	
B601	B C 1B
1001	A D 3D
K1	A C 2A
K2	A C 2A
K3	A C 2B
K5	A C 3A
K6	A C 2B
K7	A C 2B
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TL25	B C 1A
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TL202	B C 2D
TL203	B C 1C
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TL210	B C 1C
TL211	B C 1C
TL212	B C 1C
TL213	B C 2C
TL214	A C 2C
TL215	A C 2C
TL216	A C 2C
TL217	B C 2C
TL218	B C 2C
TL219	B C 2C
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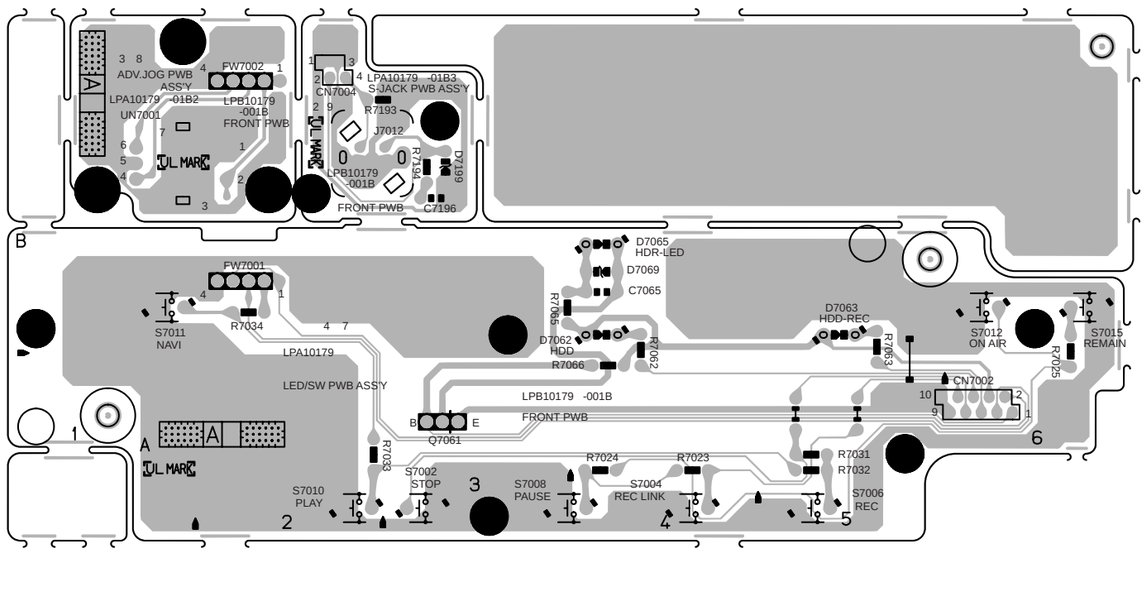
TL222	B C 2C
TL223	B C 2C
TL224	B C 2C
TL225	A C 2C
TL226	A C 2C
TL227	A C 2C
TL228	A C 2C
TL401	B C 3B
TL402	B C 3B
TL403	B C 3B
TL404	A C 3B
TL405	A C 3B
TL406	B C 3B
TL601	B C 1B
TL602	A C 1B
TL1002	A C 3C
TL1003	A C 3C
TL1004	A C 3C
TL1005	B C 3C
TL1006	A C 3C
TL1007	A C 3C
1	B C 3A
1001	B C 3D

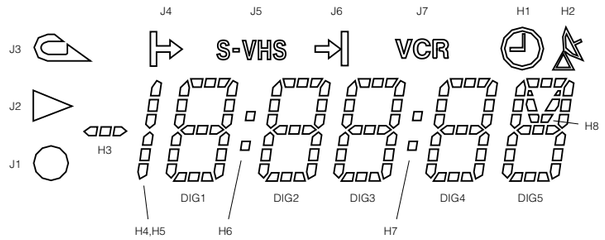
4.26 S-JACK, ADV.JOG, & LED/SW CIRCUIT BOARDS

<29> S-JACK, <38> ADV. JOG, <47> LED/SW
LPB10179-001B



4.27 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

No.	CONNECTION
1	CATHODE G, J7, H8
2	CATHODE F, J6, H7
3	CATHODE E, J5, H6
4	CATHODE D, J4, H4, H5
5	CATHODE C, J3, H3
6	CATHODE B, J2, H2
7	CATHODE A, J1, H1
8	COMMON ANODE H1-H8
9	COMMON ANODE J1-J7
10	COMMON ANODE (DIGIT 5)
11	COMMON ANODE (DIGIT 4)
12	COMMON ANODE (DIGIT 3)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)

4.28 VOLTAGE CHARTS

<SW REG>

MODE PIN NO.	REC	PLAY
IC5101		
1	305.5	306.0
2	0	0
3	0	0
4	16.5	16.4
5	0.2	0.2
IC5301		
1	2.4	2.5
2	0	0
3	4.6	4.6
IC5303		
1	3.8	3.5
2	2.5	2.5
3	0	0
4	1.2	1.2
5	1.2	1.3
IC5305		
1	2.4	2.4
2	0	0
3	3.8	3.8
CN5301		
1	5.8	5.8
2	45.6	46.7
3	10.8	10.9
4	4.8	4.8
5	12.2	12.3
6	0	0
7	0	0
8	0	0
9	12.1	12.3
10	22.4	22.4
11	5.0	5.1
12	5.1	5.1
13	0	0
14	0	0
15	-7.3	-7.3
CN5303		
1	12.1	12.3
2	0	0
3	0	0
4	5.0	5.0
CN5304		
1	11.1	11.3
2	0	0
CN5305		
1	-7.3	-7.3
2	5.1	5.1
3	5.8	5.8
4	0	0
5	3.2	3.2
6	3.2	3.2
7	0	0
8	2.5	2.5
9	2.5	2.5
10	0	0

<MAIN>

MODE PIN NO.	REC	PLAY
IC1		
1	0	2.1
2	0	2.8
3	2.6	2.6
4	1.9	1.4
5	1.9	1.4
6	2.7	2.7
7	1.6	0.7
8	0	0
9	2.8	3.1
10	2.0	2.0
11	3.1	3.1
12	2.8	2.5
13	3.1	3.1
14	3.5	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	0	3.9
20	2.8	2.8
21	1.5	1.9
22	2.8	2.8
23	3.1	2.9
24	4.9	4.9
25	0.3	0.3
26	0	0
27	1.3	2.3
28	2.8	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.4	2.4
33	4.9	4.9
34	0	2.3
35	4.9	4.9
36	2.5	2.4
37	2.4	0
38	0	1.2
39	3.8	3.8
40	0	1.1
41	0	0
42	2.1	2.1
43	0	0
44	2.1	2.1
45	4.6	4.6
46	4.6	4.6
47	2.8	2.8
48	2.6	2.6
49	4.9	0
50	2.5	0
51	2.8	0
52	0	0
53	2.5	2.5
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	2.1	2.1
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	3.0	3.0
74	0	0
75	3.1	0
76	0	0
77	0	0
78	0	0
79	4.9	4.9
80	4.9	4.9
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	0	0
87	4.9	4.9
88	0	0
89	0	0
90	0	0
91	0	3.9
92	2.6	2.6
93	0.2	0.2
94	0	0
95	2.6	2.6
96	2.5	2.5
97	2.5	2.5
98	2.5	0
99	2.4	2.5
100	2.4	4.5

MODE PIN NO.	REC	PLAY
IC201		
1	0	0
2	2.5	2.6
3	4.9	4.9
4	0	0
5	4.4	4.5
6	2.4	2.4
7	2.5	2.5
8	5.0	5.0
9	3.2	0
10	4.3	4.4
11	4.1	4.2
12	5.0	5.0
13	2.9	0
14	2.9	2.9
15	0	0
16	1.2	1.2
17	0	0
18	5.0	4.9
19	2.3	2.4
20	0	0
21	2.3	2.4
22	0.7	0.9
23	5.0	5.0
24	2.9	2.9
25	2.5	2.5
26	5.0	5.0
27	4.4	4.3
28	3.5	3.5
29	4.9	0
30	5.0	5.0
IC501		
1	2.8	2.8
2	0.2	0.1
3	2.1	2.1
4	4.8	4.9
5	2.8	2.8
6	0	0.1
7	2.1	2.1
8	0	0
9	2.8	2.8
10	0	0.2
11	2.1	2.8
12	0	0
13	0	0
14	2.8	2.8
15	2.7	0
16	2.7	2.7

MODE PIN NO.	REC	PLAY
IC2601		
1	0	0
2	0	0
3	0	0
4	-5.6	-5.6
5	0	0
6	0	0
7	0	0
8	9.1	9.2
IC2603		
1	5.9	5.4
2	0	0
3	0	5.3
4	0	0
5	0	0
6	0	0
7	-5.6	-5.6
8	0	0
IC2604		
1	5.9	5.3
2	6.0	5.3
3	5.9	6.2
4	-5.6	-5.7
5	5.6	3.5
6	5.6	3.5
7	5.6	3.6
8	9.2	9.1
IC2605		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	9.2	9.2
IC2606		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	5.6	5.6
IC2610		
1	0	0
2	0	0
3	0	0
4	-5.6	-5.0
5	0	0
6	0	0
7	0	0
8	5.6	5.6
IC3001		
1	0	2.5
2	0	0
3	0	0
4	0	0
5	0	0
6	0	2.5
7	0	0
8	0	0
9	0	2.8
10	0	0
11	0	0
12	0	0
13	4.7	0
14	4.6	4.7
15	4.9	4.6
16	0	4.9
17	0	4.9
18	4.9	3.9
19	4.5	4.9
20	0	0
21	4.1	0
22	0	2.3
23	4.8	0
24	4.7	4.8
25	0	0
26	0	4.9
27	0	0
28	0	0

MODE PIN NO.	REC	PLAY
29	4.8	4.9
30	4.8	4.9
31	0	4.9
32	0	0
33	0	0
34	0	0
35	2.5	2.5
36	0	4.8
37	0	0
38	0	3.8
39	0	4.2
40	0	0
41	4.8	4.8
42	4.4	4.4
43	0	0
44	0	0
45	4.9	4.9
46	4.8	4.9
47	0	0
48	4.4	4.4
49	4.5	0
50	4.6	0
51	0	0
52	4.1	4.2
53	4.3	4.3
54	-	0
55	-	-
56	0	0
57	0	0
58	4.9	0
59	0	0
60	0	4.9
61	0	0
62	0	0
63	0	0
64	1.3	0
65	0.8	0
66	4.9	4.9
67	2.4	2.5
68	0	0
69	2.4	2.4
70	4.9	0
71	4.9	4.9
72	4.8	0
73	4.8	0
74	0	0
75	4.4	4.2
76	4.3	4.4
77	4.9	4.9
78	0	4.9
79	0	0.1
80	0	0.1
81	5.0	5.0
82	4.9	0
83	0	0
84	0	0
85	0	0
86	4.9	4.9
87	4.9	0
88	4.9	0
89	0	0
90	0	0
91	0	2.8
92	0	0
93	0	0
94	0	0
95	0	0
96	4.1	4.1
97	1.2	0
98	0.4	0.4
99	0	2.5
100	2.5	2.6
101	2.6	2.6
102	2.4	2.4
103	0	0
104	0	0
105	4.9	4.9
106	4.9	4.9
107	0	0
108	1.3	1.3
109	4.9	4.9
110	0	0
111	0	0
112	2.4	2.4
IC3002		
1	4.9	4.9
2	4.9	5.0
3	0	0
4	0	0

MODE PIN NO.	REC	PLAY
IC7002		
1	4.9	4.9
2	4.9	4.9
3	0	0
CN1		
1	0	0
2	0	0
3	0	0
4	2.3	2.2
5	2.3	2.2
6	2.3	2.2
7	2.5	0
8	2.5	0
9	2.5	0
10	0	0
11	0	0
CN701		
1	2.6	2.6
2	0	0
3	2.2	2.4
4	5.0	5.0
5	2.0	2.0
6	0	3.4
7	3.3	3.3
8	0	0
9	2.8	2.8
10	0	0
11	4.6	4.6
12	4.6	4.6
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	2.8	2.8
CN7504		
1	0	0
2	4.4	4.5
3	4.3	4.4
4	0	0
5	2.6	2.6
6	10.9	10.9
7	4.9	5.0
8	0	0
9	4.9	4.9
CN7505		
1	0	10.5
2	4.7	4.8
3	0	0
4	0	0
5	1.2	0
6	0	0
7	0	0
CN7507		
1	0	0
2	0	0
3	0	0
4	0	0
5	3.5	3.5
6	3.7	3.7
7	4.9	4.9
8	4.9	4.9
9	4.9	4.9
10	2.9	2.9
CN3901		
1	0	0
2	4.9	0
3	0	0
4	5.0	4.9
5	0	0
6	4.9	4.9
CN6701		
1	0	0
2	4.4	4.4
3	0	0
4	0	4.8
5	0	0
6	0	0
7	0	5.0
8	0	0
9	0	0
10	0	0
CN7003		
1	1.5	1.5
2	0	0
3	0	0
4	0	0
IC703		
1	6.1	6.0
2	0	0
3	5.4	5.4
4	0	0
5	3.1	3.2
6	0	3.4
7	0	0
8	3.9	4.1
9	0	4.0
10	0	0
11	3.8	3.9
12	4.0	4.0
13	10.9	10.9
14	4.6	4.6
15	5.8	5.8
CN7511		
1	0	0
2	0	0
3	3.7	3.8
4	4.3	4.3
5	3.2	3.2
6	3.2	3.2
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0

<2D DIGITAL>

MODE PIN NO.	REC	PLAY
IC1201	-	-

<TERMINAL>

MODE PIN NO.	REC	PLAY
IC701		
1	2.8	2.8
2	0.2	0
3	2.1	2.1
4	4.9	4.9
5	2.8	4.8
6	0.2	0.2
7	2.1	2.0
8	0	0
9	2.8	2.8
10	0.2	0.2
11	2.1	2.1
12	2.8	2.8
13	0	0
14	2.8	2.8
15	2.3	2.2
16	2.7	2.7
17	2.4	2.4
18	0	0
19	2.3	2.3
20	0	0
21	2.6	2.6
22	2.7	2.7
23	2.9	2.7
24	2.8	2.8
25	5.0	4.9
26	5.0	4.9
27	2.9	2.9
28	2.4	2.3
29	2.5	2.4
30	0.7	0.3
31	2.7	2.7
32	0	0
33	2.7	2.8
34	2.8	2.8
35	2.8	2.8
36	2.8	2.8
37	4.7	0
38	4.4	4.5
39	4.8	4.5
40	4.5	2.8
41	2.7	2.7
42	2.7	2.8
43	2.3	2.3
44	2.9	1.6
45	2.1	2.0
46	5.0	4.9
47	4.3	0
48	2.8	0
49	2.8	0.4
50	2.8	2.8
51	2.9	2.9
52	0	0
53	3.2	3.1
54	2.3	2.3
55	2.5	1.9
56	2.5	2.5
IC704		
1	0	0
2	0	1.2
3	5.0	4.9
4	1.2	2.1
5	0	0
6	2.0	2.0
IC705		
1	0	0
2	0	0
3	4.9	4.9
4	2.8	0
5	0	0
6	2.8	2.8
IC901		
1	1.6	1.6
2	0	0
3	1.6	1.6
4	10.6	10.5
5	1.9	2.0
6	0	0
7	4.6	4.6
8	10.5	10.5
9	4.6	4.6
10	0.5	0.5
11	4.6	4.6
12	0	0
13	4.5	4.4
14	4.5	4.5
15	4.6	4.6
16	4.6	4.6
17	4.6	4.6
18	4.6	4.6
19	10.6	10.5
20	2.5	2.5
21	1.3	1.3
22	1.3	1.4
23	2.5	2.6
24	2.0	2.0
CN701		
1	2.1	2.0
2	2.3	0
3	2.3	2.2
4	0	0
5	2.5	2.4
6	0	0
7	2.8	2.8
8	0	0
CN702		
1	0	0
2	4.4	4.4
3	4.5	4.5
4	0	0
5	2.6	2.6
6	10.9	10.8
7	5.0	4.9
8	0	0
9	4.9	4.9
CN703		
1	2.3	2.4
2	0.1	0

MODE PIN NO.	REC	PLAY
3	2.2	2.3
4	0	0
5	2.4	2.4
6	0	0
7	2.8	2.7
8	0	0
9	2.8	2.8
CN704		
1	0.1	0.1
2	0	0
3	0.7	0.7
4	0	0
5	2.8	2.8
6	0	0
7	2.8	2.9
8	0	0
9	2.6	-
CN705		
1	0	1.4
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0.8	0.9
8	0	0
9	0	0
CN901		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
CN903		
1	10.6	10.5
2	4.7	4.9
3	0	0
4	0	0
5	1.2	1.2
6	0	0
7	2.1	2.1

<DEMOD>

MODE PIN NO.	REC	PLAY
IC6701		
1	5.0	4.9
2	1.5	1.5
3	1.5	1.5
4	0	0
5	2.4	2.4
6	2.4	0
7	0.5	0
8	0	0
9	0	0
10	3.7	0
11	3.6	3.6
12	4.5	4.5
13	4.4	4.5
14	2.5	2.5
15	2.5	2.5
16	0	0
17	0.4	0.9
18	0.4	0.9
19	5.0	4.9
20	0	0
21	0.2	0.9
22	4.6	4.8
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	2.5	3.7
35	0	0
36	0	2.3
37	0	0
38	1.4	1.0
39	3.2	3.2
40	0	0
41	0	0
42	1.2	0.3
43	3.2	0.3
44	1.3	3.2
45	1.1	0
46	0	0
47	1.2	0
48	1.0	0
49	3.2	0.4
50	1.1	3.2
51	1.0	0.3
52	0	0
53	1.1	0
54	0	0
IC201		
1	3.2	3.2
2	0.5	0
3	0.5	0
4	1.7	0
5	0.5	0.3
6	0	0
7	0	1.0
8	0.3	0
9	0.6	0.3
10	3.1	3.2
11	0	0.1
12	0	0.1
13	0	0.1
14	0	0
15	1.6	1.6
16	1.7	1.8
17	0	0
18	1.5	1.6
19	3.2	3.2
20	1.6	1.8
21	1.5	1.6
22	1.6	1.7
23	0	0
24	3.1	0
25	1.2	1.1
26	0.7	0.7
27	3.2	3.2
28	0.9	1.0
29	0	0
30	0	0
31	0	0
32	0.5	0.4
33	1.6	0
34	1.7	0
35	1.9	2.0
36	3.2	3.2
37	2.9	3.0
38	2.3	2.4
39	2.9	3.0
40	0	0
41	0	0
42	0	0
43	0.6	0.6
44	3.2	3.2
45	0.6	0.4
46	0.5	0.4
47	0	0
48	0.3	0.7
49	0	0
50	0.6	0.3
51	0	1.0
52	0.5	0.6
53	0	3.2
54	0.6	0.3
55	0.5	0.5
56	0	0.4
57	0.6	0
58	0	0.4
59	0.5	0.8
60	0	0.3
61	0.6	0.9

<S-JACK>

MODE PIN NO.	REC	PLAY
CN7004		
1	0	0
2	0	0
3	0	0
4	0	0

<ADV.JOG>

MODE PIN NO.	REC	PLAY
FW7002		
1	4.9	4.9
2	0	0
3	0	0
4	0	0

<FRONT>

MODE PIN NO.	REC	PLAY
CN7002		
1	2.9	2.9
2	0	0
3	4.9	0
4	4.9	4.9
5	4.1	3.7
6	3.9	3.5
7	4.1	4.9
8	4.9	4.9
9	0	0
10	0	0

<DIGITAL>

MODE PIN NO.	REC	PLAY
IC1	-	-
IC3		
1	3.2	3.2
2	1.4	0.2
3	3.2	0
4	1.2	0.3
5	1.1	0.1
6	0	0.3
7	1.4	0.1
8	1.3	0.3
9	3.2	0.1
10	1.3	0.3

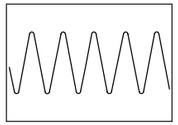
MODE PIN NO.	REC	PLAY
62	3.2	3.2
63	0.4	0.5
64	0.7	0.3
65	0.1	0
66	0.1	1.2
67	0	0
68	1.5	1.6
69	0	0
70	0.2	1.4
71	-	0
72	0	0
73	0	0
74	0.9	0
75	3.2	3.2
76	1.5	1.5
77	1.8	0
78	1.6	1.6
79	1.6	3.2
80	3.2	3.2
81	3.2	3.2
82	0	0
83	0.2	1.4
84	0	0
85	0	0.1
86	3.2	3.2
87	3.2	3.2
88	3.2	3.2
89	1.7	1.8
90	0	0
91	0	3.2
92	0	0
93	3.2	3.2
94	3.2	3.2
95	0.2	1.1
96	0	0
97	0	0
98	1.2	0
99	1.0	1.1
100	0	0
101	1.8	1.8
102	0	0
103	0	0
104	0	0
105	0	0.1
106	0	0
107	3.2	1.8
108	1.7	1.8
109	0	0
110	0	2.7
111	1.1	1.2
112	0	0
IC3651		
1	0	0
2	0	0
3	0	0.2
4	0	4.9
5	4.2	0
6	0	0
7	0	0
8	0	0
9	5.6	5.6
10	5.6	5.6
11	3.6	3.7
12	3.4	3.6
13	2.8	2.9
14	0	0
15	0	0
16	4.9	4.9
IC7001		
1	2.3	2.3
2	4.1	4.2
3	4.3	4.2
4	4.2	4.2
5	4.9	4.9
6	3.7	3.1
7	2.8	3.7
8	3.2	3.1
9	1.8	1.8
10	2.5	2.5
11	2.5	2.6
12	3.1	2.6
13	0	0.6
14	0	0.6
15	0	0.6
16	0	0.6
17	3.6	3.6
18	3.8	3.8
19	3.8	3.8
20	0	4.9
21	0	0
22	0	3.8
23	3.8	3.8
24	3.8	3.8
25	3.8	3.8
26	0	0
27	0	0
28	0	0

MODE PIN NO.	REC	PLAY
223	3.0	3.0
224	0	3.2
225	3.1	3.0
226	3.0	3.0
227	0.6	0.6
228	0	0.1
229	0.1	0.4
230	0	0
231	0.6	0.4
232	0.5	0.9
233	3.2	3.2
234	0.7	0.4
235	0.7	1.3
236	0.5	0.6
237	0	0
238	0.6	0
239	0.6	0
240	0.6	0.3
IC202		
1	3.2	3.2
2	0.7	0.6
3	0	3.2
4	0.5	0.4
5	0	0
6	0	0
7	0.6	0.9
8	0.5	0.2
9	3.2	0
10	0.6	1.1
11	0.6	0.6
12	0	0
13	0.6	0
14	3.2	3.2
15	0.1	0
16	0	0
17	0.1	0.2
18	0.1	0.3
19	0.6	0.4
20	3.2	3.2
IC206		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	1.1	0
15	0	0
16	0	0
17	0	1.6
18	0	0
19	0.6	0
20	3.2	3.2
IC207		
1	2.5	2.5
2	4.7	4.7
3	2.5	2.5
4	2.5

4.29 WAVEFORMS

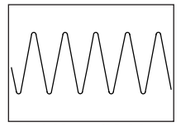
< MAIN/AUDIO >

WF1 IC2201-9



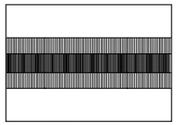
REC 0.34 Vp-p
0.2 V/1.0 msec/DIV

WF2 IC2201-53



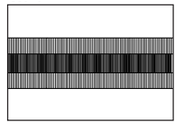
REC 0.36 Vp-p/PB 0.2 Vp-p
0.1 V/1.0 msec/DIV

WF3 IC2201-21



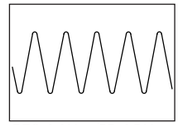
REC 1.5 Vp-p
0.5 V/2 msec/DIV

WF4 TP2253 A.PB.FM



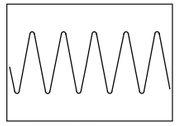
PB 1.5 Vp-p
0.5 V/0.5 msec/DIV

WF5 IC1-53



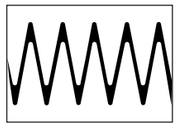
REC 1.4 Vp-p/PB 1.5 Vp-p
0.1 V/1.0 msec/DIV

WF6 IC1-63



REC 28 mVp-p
10 mV/1.0 msec/DIV

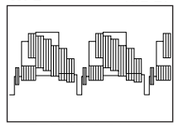
WF7 IC1-99



REC 0.45 Vp-p
0.2 V/1.0 msec/DIV

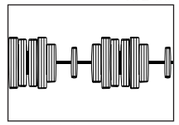
< MAIN/VIDEO >

WF1 IC1-27



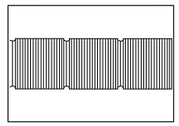
REC/PB 1.8 Vp-p
0.5 V/10 µsec/DIV

WF2 IC1-30



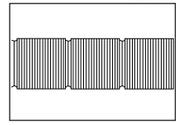
PB 1.2 Vp-p
0.2 V/20 µsec/DIV

WF3 IC1-1



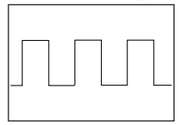
PB 0.4 Vp-p
0.1 V/5 msec/DIV

WF4 TP106 PB.FM



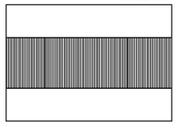
PB 0.4 Vp-p
0.1 V/5 msec/DIV

WF5 TP111 D.FF



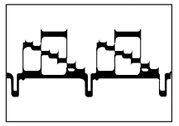
REC/PB 4.0 Vp-p
2.0 V/10 msec/DIV

WF6 IC1-85



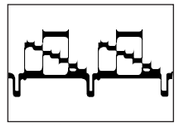
REC 1.4 Vp-p
0.5 V/2 msec/DIV

WF7 IC1-14



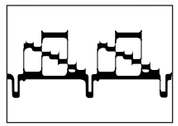
PB 0.44 Vp-p
0.2 V/20 µsec/DIV

WF8 IC1-13



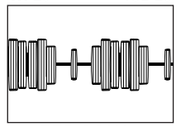
REC/PB 0.44 Vp-p
0.2 V/20 µsec/DIV

WF9 IC1-11



REC/PB 0.44 Vp-p
0.2 V/20 µsec/DIV

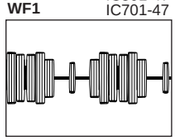
WF10 IC1-16



REC 0.64 Vp-p
0.2 V/20 µsec/DIV

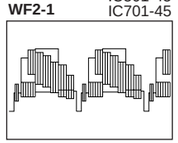
<MAIN/S-SUB>, <TERMINAL>

WF1 IC501-47 IC701-47



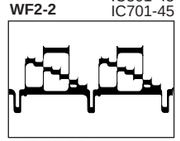
PB 2.0 Vp-p
0.5 V/20 µsec/DIV

WF2-1 IC501-45 IC701-45



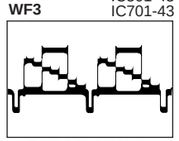
REC 1.6 Vp-p
0.5 V/20 µsec/DIV

WF2-2 IC501-45 IC701-45



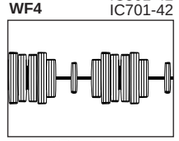
REC/PB 1.6 Vp-p
0.5 V/20 µsec/DIV

WF3 IC501-43 IC701-43



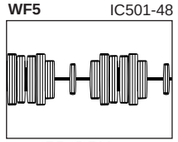
REC/PB 0.68 Vp-p
0.2 V/20 µsec/DIV

WF4 IC501-42 IC701-42



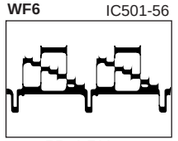
REC/PB 0.52 Vp-p
0.2 V/20 µsec/DIV

WF5 IC501-48



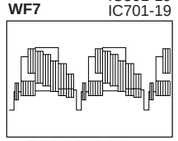
PB 0.5 Vp-p
0.2 V/20 µsec/DIV

WF6 IC501-56



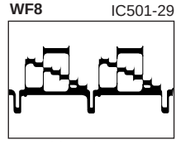
PB 1.7 Vp-p
0.5 V/20 µsec/DIV

WF7 IC501-19 IC701-19



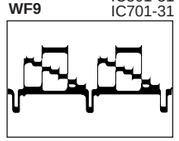
REC/PB 2.0 Vp-p
0.5 V/20 µsec/DIV

WF8 IC501-29



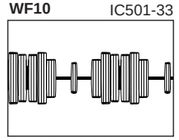
REC/PB 0.44 Vp-p
0.2 V/20 µsec/DIV

WF9 IC501-31 IC701-31



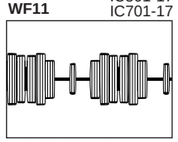
PB 0.6 Vp-p
0.2 V/20 µsec/DIV

WF10 IC501-33



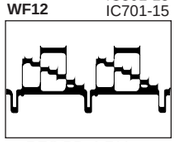
REC 0.64 Vp-p
0.2 V/20 µsec/DIV

WF11 IC501-17 IC701-17



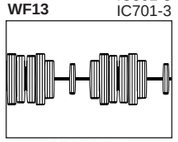
REC/PB 1.3 Vp-p
0.5 V/20 µsec/DIV

WF12 IC501-15 IC701-15



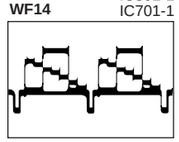
REC/PB 1.7 Vp-p
0.5 V/20 µsec/DIV

WF13 IC501-3 IC701-3



REC 0.7 Vp-p
0.2 V/20 µsec/DIV

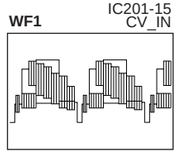
WF14 IC501-1 IC701-1



REC 0.9 Vp-p
0.2 V/20 µsec/DIV

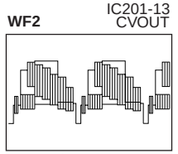
< MAIN/ON SCREEN >

WF1 IC201-15 CV_IN



REC/PB 2.2 Vp-p
0.5 V/20 µsec/DIV

WF2 IC201-13 CVOUT



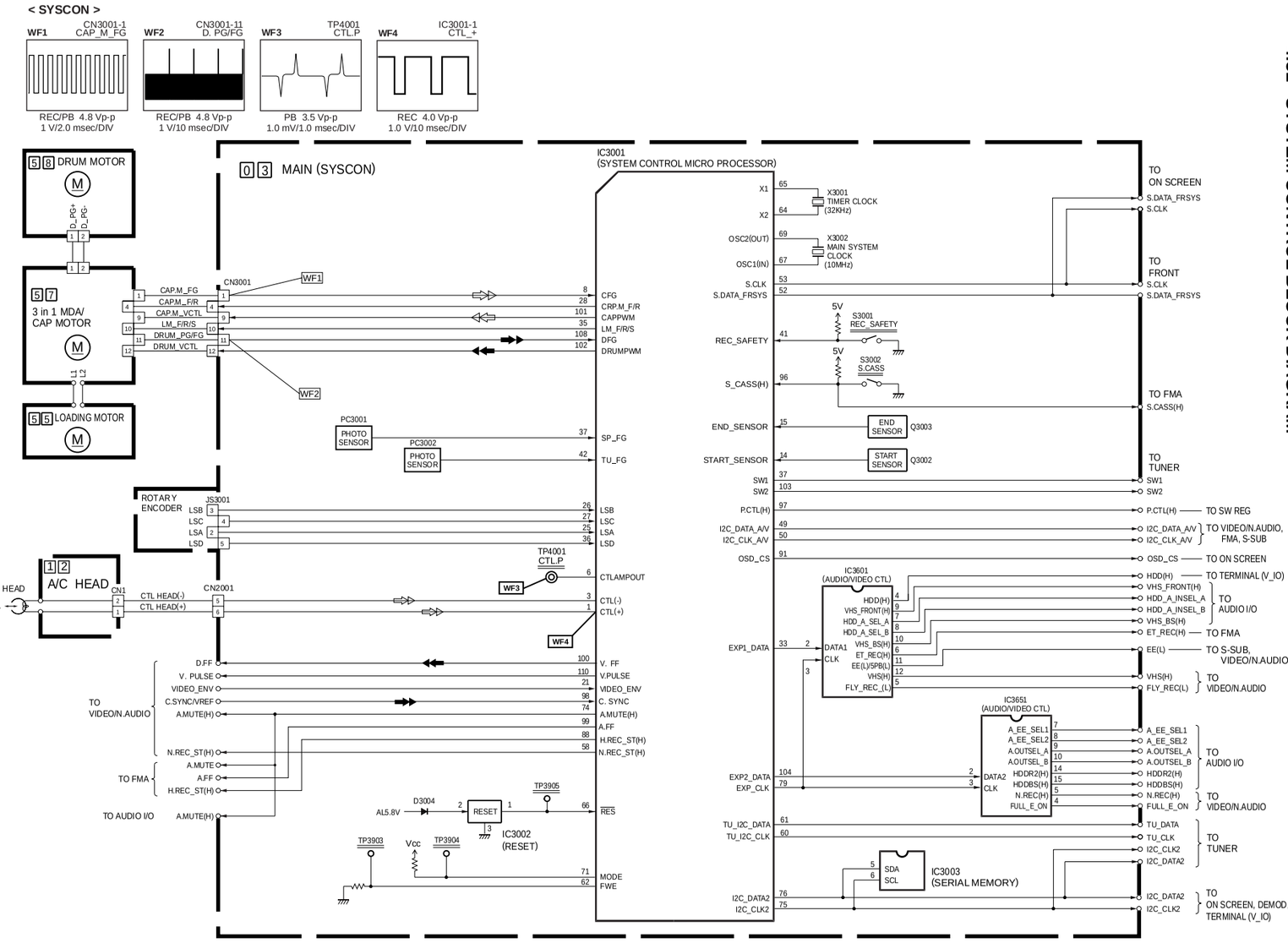
REC/PB 2.2 Vp-p
0.5 V/20 µsec/DIV

4.30 CPU PIN FUNCTION

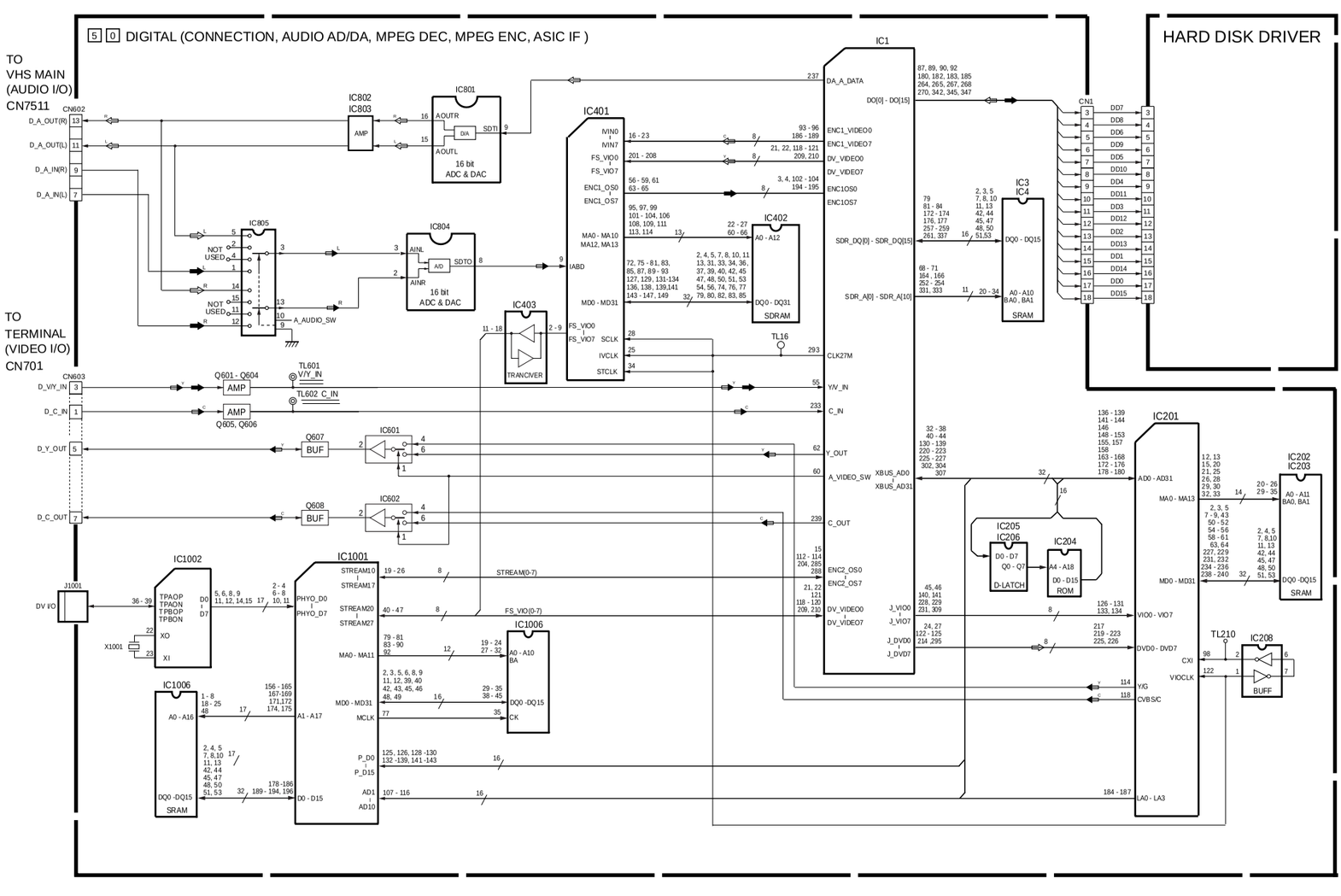
<SYSCON IC3001>

PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CONTROL SIGNAL(+)
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CONTROL SIGNAL(-)
4	CTLBIAS	-	CONTROL BIAS VOLTAGE
5	CTLFB	IN	CONTROL PULSE FEED BACK
6	CTLAMPOUT	OUT	CONTROL PULSE OUTPUT
7	CTLSMTIN	IN	CONTROL PULSE INPUT
8	CFG	IN	CAPSTAN MOTOR FG INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	SVHS MODE:H
12	SEC.DET/BIT_IN	IN	NC / BIT STREAM INPUT
13	SCR_ID	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE:H)
14	START_SENSOR	IN	START SENSOR
15	END_SENSOR	IN	END SENSOR
16	KEY2	IN	SWITCH OPERATION SIGNAL
17	KEY3	IN	SWITCH OPERATION SIGNAL
18	RF_AGC/LED	IN	CHANGES IN ATS+IC OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT
19	KEY1	IN	SWITCH OPERATION SIGNAL
20	BS_ANT/AFC	IN	NC / TUNING CHECK
21	VIDEO_ENV	IN	AUTO TRACKING DETECT / INPUT THE AERAGE OF PLAYBACK VIDEO SIGNAL
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV.INPUT / NON HiFi MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP.M_F/R	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD : H / REV : L)
29	RC	IN	REMOTE CONTROL DATA INPUT
30	BS_REC_CTL/PAL_PB(H)	OUT	NC / PAL FM(PB ON:H)
31	P50_IN	IN	CONTROL SIGNAL FOR TV LINK
32	76PinCTL	OUT	CONTROL SIGNAL FOR VIDEO / AUDIO SIGNAL PROCESSOR
33	EXP1_DATA	OUT	SERIAL DATA TRANSMISSION OUTPUT FOR AUDIO / VIDEO CONTROL IC
34	P50_OUT/M_PULSE	OUT	CONTROL SIGNAL FOR TV LINK
35	LM_F/R/S(LMC1)	OUT	LOADING MOTOR DRIVE(1)
36	LSD(LMC2)	OUT	LOADING MOTOR DRIVE(2)
37	SW1	OUT	TUNER SYSTEM MODE:H
38	SB_GAIN	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	STB/TEST	OUT	STROBE SIGNAL (FOR FDP DRIVER)
40	POWER_DET	IN	DETECTION SIGNAL FOR VIDEO FREQUENCY RESPONSE
41	REC_SAFETY	IN	REC SAFETY SWITCH DETECT(SW ON:L)
42	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
43	VSS	-	GND
44	RMO	OUT	REMOTE CONTROL OUTPUT FOR SATELLITE RECEIVER
45	VCC	-	SYSTEM POWER
46	KBUS_DATA_IN	IN	SERIAL DATA TRANSFER INPUT FOR SUB CPU
47	KBUS_DATA_OUT	OUT	SERIAL DATA TRANSFER OUTPUT FOR SUB CPU
48	KBUS_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR SUB CPU
49	I2C_DATA_AV	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO / AUDIO IC
50	I2C_CLK_AV	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO / AUDIO IC
51	S.DATA_TOSYS	IN	SERIAL DATA TRANSFER OUTPUT FROM THE ON-SCREEN IC TO THE FDP DRIVER
52	S.DATA_FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION / TAPE REMAIN
55	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION / TAPE REMAIN
56	JSB/STLB	IN	INPUT FOR THE JOG SHUTTLE
57	JSA/STLA	IN	INPUT FOR THE JOG SHUTTLE
58	N.REC_ST(H)	OUT	NORMAL AUDIO REC START:H
59	JUST/EDS(H)/SECAM(H)	IN	NC
60	TU_I2C_CLK	OUT	CLOCK FOR DATA TRANSFER TO THE TUNER UNIT
61	TU_I2C_DATA	OUT	TUNING DATA
62	FEW	-	FLASH WRITE ENABLE
63	NMI	-	NC
64	X2	-	TIMER CLOCK(32KHz)
65	X1	-	TIMER CLOCK(32KHz)
66	RES	-	RESET TERMINAL
67	OSC1(IN)	-	SYSTEM CLOCK(10KHz)
68	VSS	-	GND
69	OSC2(OUT)	-	SYSTEM CLOCK(10KHz)
70	VCC	-	SYSTEM POWER
71	MODE		
72	TU_A_MUTE(H)	OUT	TUNER AUDIO MUTE CONTROL(MUTE:H)
73	TU_V_MUTE(H)	OUT	TUNER VIDEO MUTE CONTROL(MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL(MUTE:H)
75	I2C_CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C_DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	HI_S_FF_REW	OUT	HIGH SPEED FF / REW
78	HD_SYNC_DET	IN	DETECTION OF HDD SYNC SIGNAL
79	EXP_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR AUDIO / VIDEO CONTROL IC
80	V.P.CTL	OUT	V PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	SYNC_DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL(DETECTED:H)
82	VCC	-	SYSTEM POWER
83	SLOW_P	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE
84	VSS	-	GND
85	SP_SHORT(H)	OUT	MODE SELECT
86	LP_SHORT(H)	OUT	MODE SELECT
87	FLY.ON(H)	OUT	FRYING ERASE ON : H
88	H.REC_ST(H)	OUT	HiFi AUDIO REC START : H
89	TRICK(H)	OUT	SPECIAL PLAYBACK : H
90	P.SAVE(L)	OUT	PICTURE SAVE MODE (SAVE : H)
91	OSD_CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
92	DIGI_RESET	IN	DIGITAL RESET
93	BS_P.CTL(H)/MESECAM(H)	OUT	NC / MESECAM : H
94	KBUS_REQ	OUT	
95	SHTL(H)	IN	INPUT FOR THE JOG SHUTTLE
96	S.CASS(H)	IN	DETECTION SIGNAL FOR S-VHS CASESETTE (S-VHS : H)
97	P.CTL(L)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR / TIMING CONTROL SIGNAL FOR REC
101	CAPPWN	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWN	OUT	DRUN MOTOR CONTROL
103	SW2	OUT	TUNER SYSTEM MODE : L
104	EXP2_DATA	OUT	SERIAL DATA TRANSMISSION OUTPUT FOR AUDIO / VIDEO CONTROL IC
105	SP(H)	OUT	
106	P.MUTE(H)	OUT	PICTURE MUTE CONTROL (MUTE : H)
107	NC	-	NC
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CONTROL REFERENCE VOLTAGE

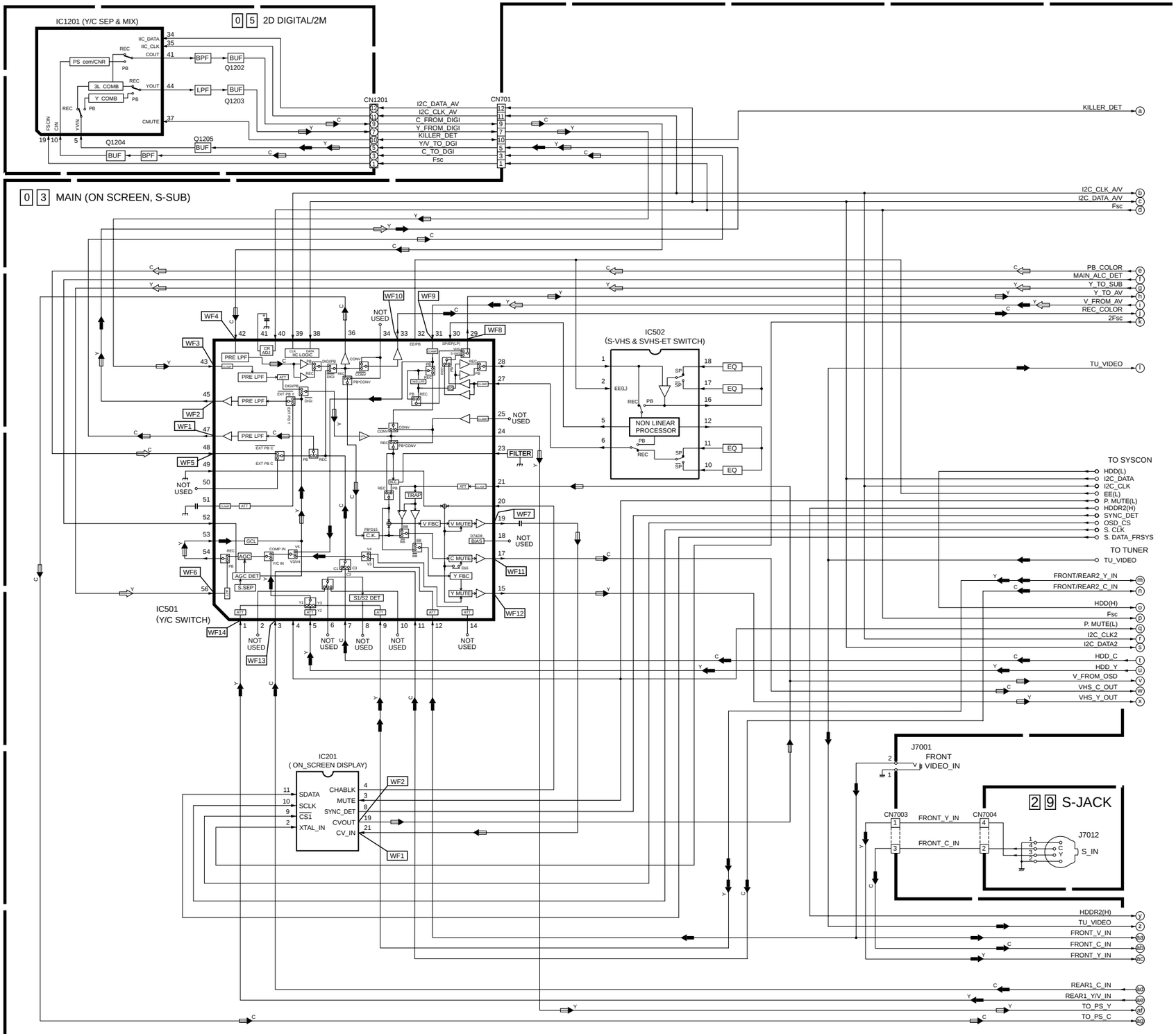
4.31 SYSTEM CONTROL BLOCK DIAGRAM



4.32 HDD BLOCK DIAGRAM



4.33 VIDEO BLOCK DIAGRAM



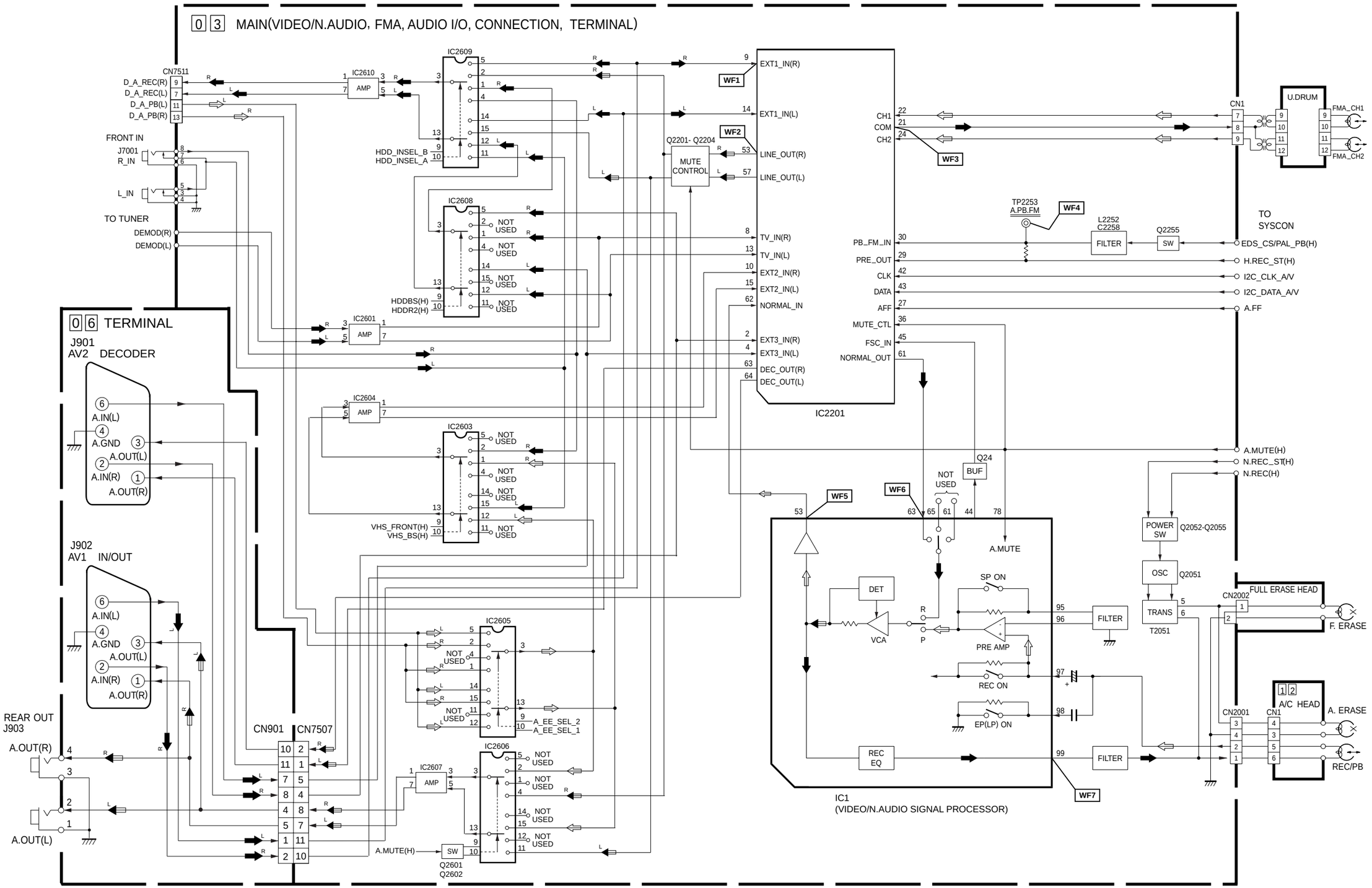
Note : For the waveforms in this block diagram, refer to page 4-55.

0 3 MAIN (VIDEO/N. AUDIO, CONNECTION)

0 6 TERMINAL (I/O, V_IO)

Note : For the waveforms in this block diagram, refer to page 4-55.

4.34 AUDIO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-55.

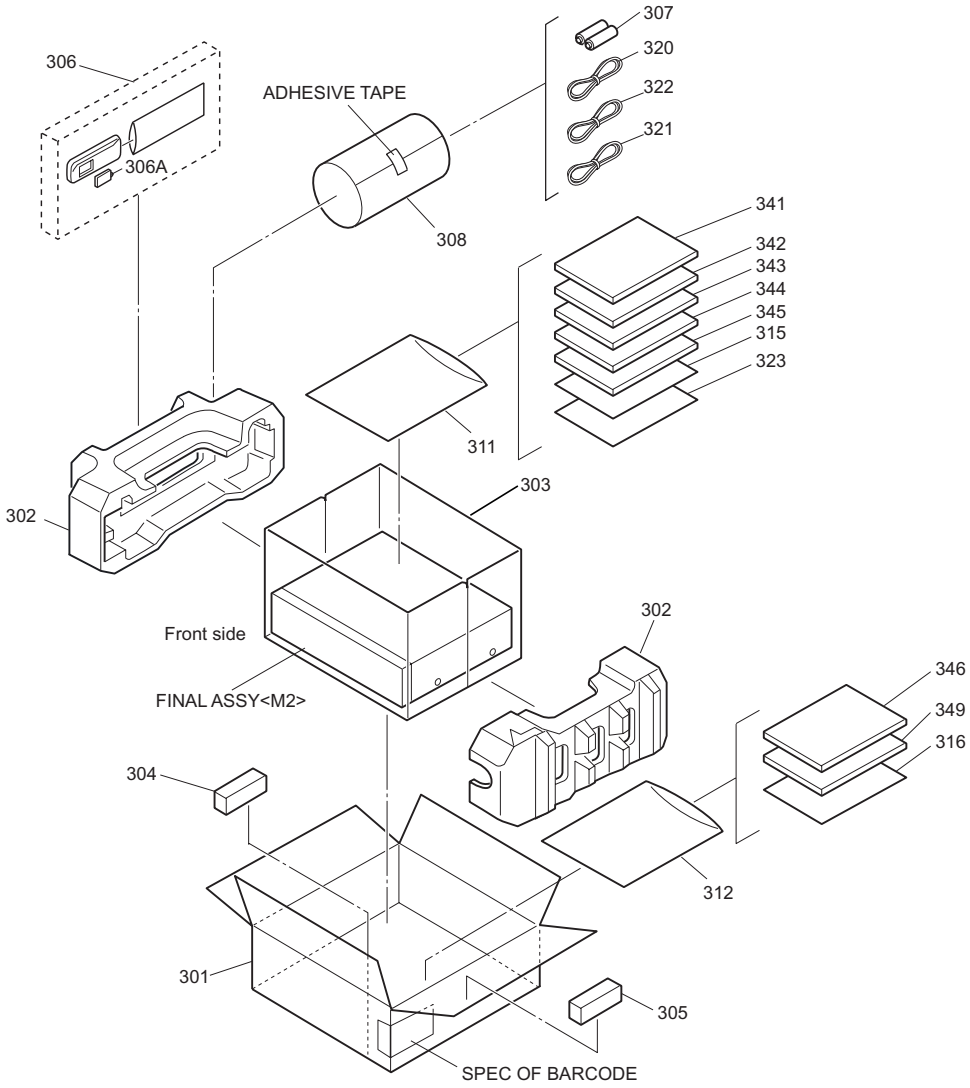
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.

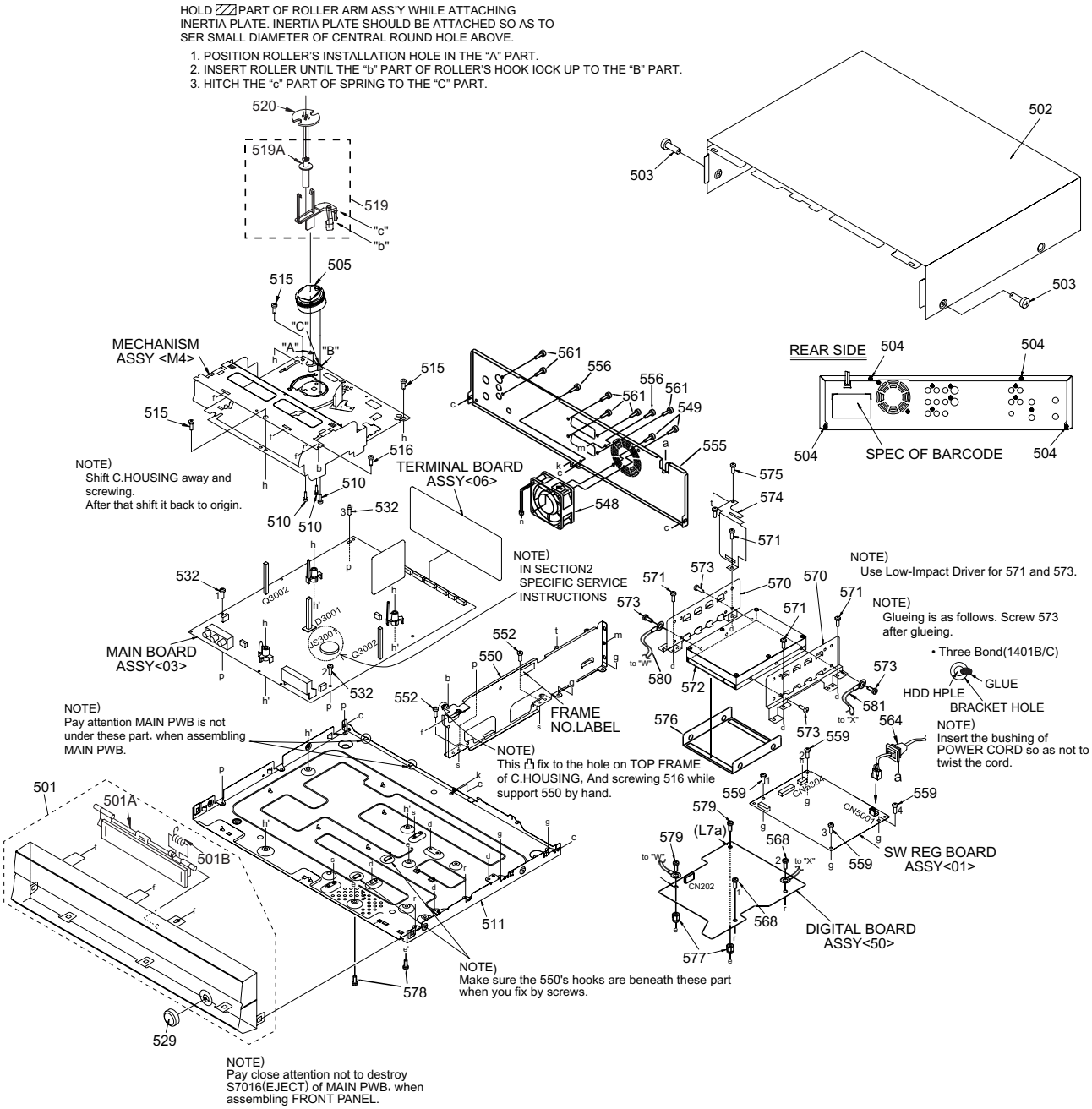


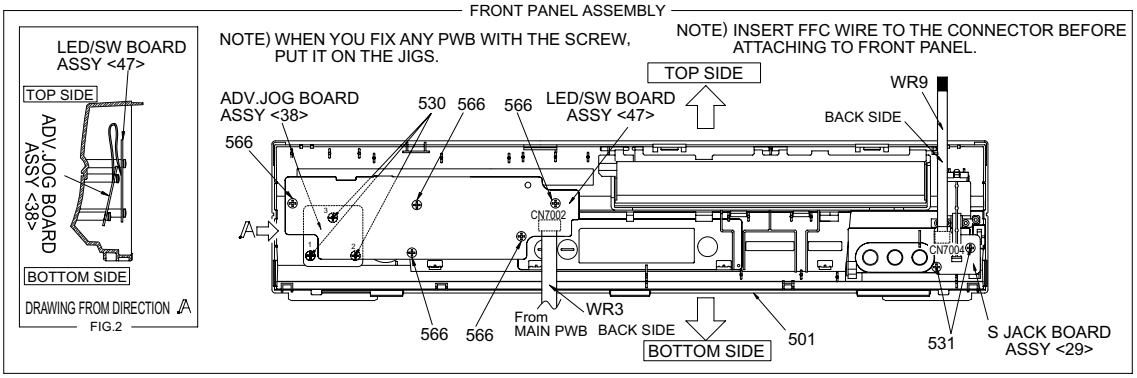
#	⚠	REF No.	PART No.	PART NAME DESCRIPTION
**********				
				PACKING AND ACCESSORY ASSEMBLY <M1>
		301	LP31182-010A	PACKING CASE
		302	LP31184-001C	CUSHION ASSY
		303	PQM30021-105	POLY BAG
		304	LP40967-004A	MINI CUSHION,BOTTOM
		305	LP40967-005A	MINI CUSHION,TOP
		306	LP21036-018B	REMOTE CTL UNIT
		306A	LP40254-007A	COVER(BATTERY)
		307	–	BATTERY,X2
		308	QPC02202230P	POLY BAG,CABLE
		311	QPC02503530P	POLY BAG,INST
		312	QPC02503530P	POLY BAG,INST,EX
		315	BT-54008-4	GUARANTY CARD,EK
		316	BT-54013-5	WARRANTY CARD,EX
		320	PEAC0300-02	RF CABLE
		321	QAL0095-005	LED CABLE ASSY
		322	QAM0238-002	PERI CABLE
		323	LYT0194-001B	Q.CARD(JUK),EK
	⚠	341	LPT0736-001A	INST.BOOK(ENGLISH),EX
	⚠	341	LPT0737-001A	INST.BOOK(ENGLISH),EK
	⚠	342	LPT0736-002A	INST.BOOK(GERMAN),EX
	⚠	343	LPT0736-003A	INST.BOOK(FRENCH),EX
	⚠	344	LPT0736-004A	INST.BOOK(DUTCH),EX
	⚠	345	LPT0736-005A	INST.BOOK(SPANSIH),EX
	⚠	346	LPT0736-006A	INST.BOOK(ITALIAN),EX
	⚠	349	LPT0736-007A	INST.BOOK(SWEDISH),EX

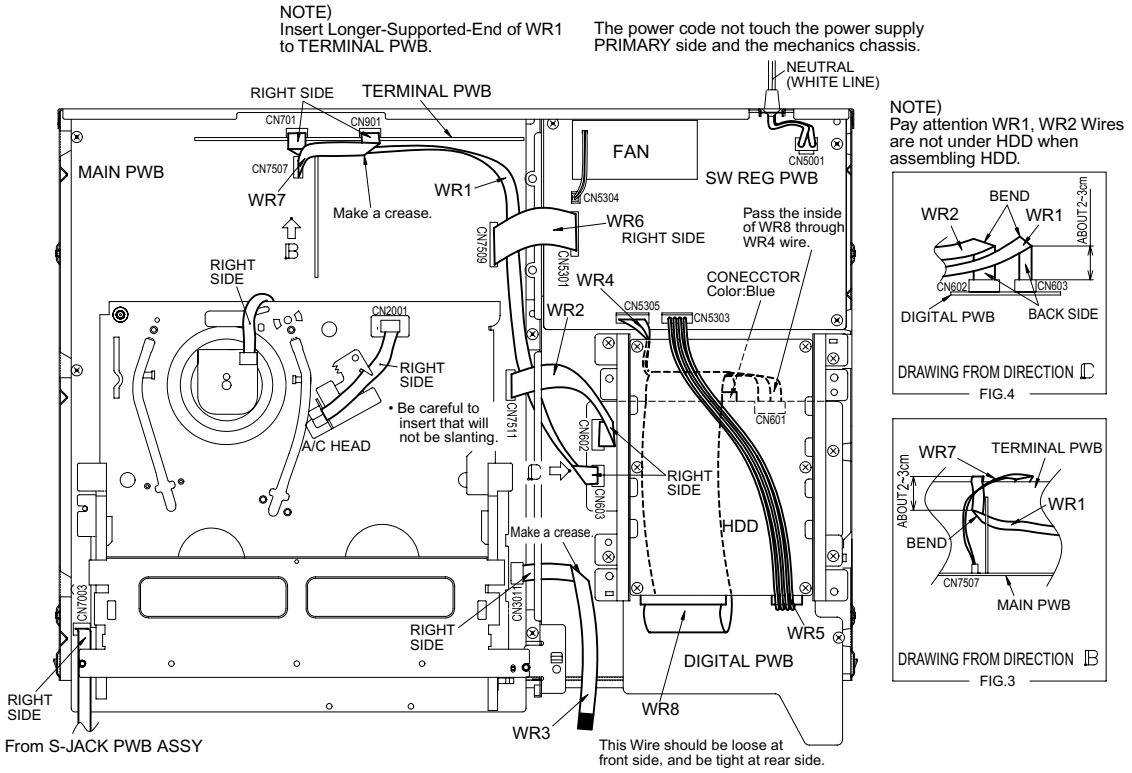
5.2 FINAL ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

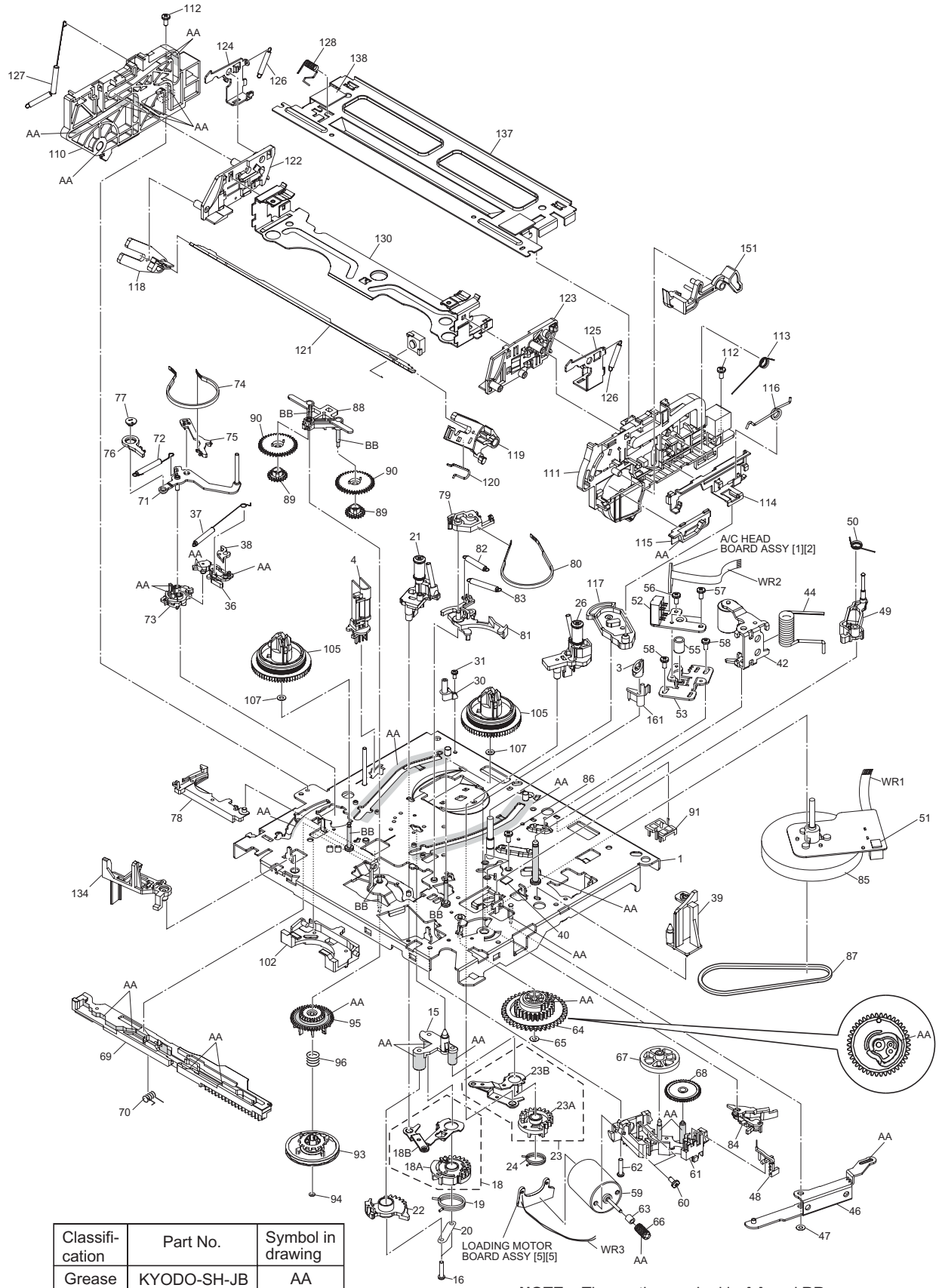






#	⚠	REF No.	PART No.	PART NAME DESCRIPTION
**********				
			FINAL ASSEMBLY <M2>	
	⚠	501	LP10458-003D	F.PANEL ASSY,EX
	⚠	501	LP10458-004D	F.PANEL ASSY,EK
		501A	LP21130-003A	CASSETTE DOOR
		501B	PQ46448	TOR.SPRING
	⚠	502	LP10460-003A	TOP COVER,FLAT
		503	QYSBSG3006N	TAP SCREW,X2,TOP SIDE
		504	QYSBSG3006N	TAP SCREW,X4,TOP REAR
		505	PDV2547A	DRUM FINAL ASSY
		510	QYSPSPD3008Z	SCREW,X3,DRUM
	⚠	511	LP10461-002B	BOTTOM CHASSIS
		515	LP40980-001A	SPECIAL SCREW,X3,MECHA
		516	LP40990-001A	SPECIAL SCREW,HOUSING
		519	LP40370-001F	ROLLER ARM ASSY
		519A	PDM4311A-1	ROLLER ASSY
		520	PQ45160	INERTIA PLATE
		529	LP31169-001A	KNOB ASSY
		530	QYTDSF2608Z	TAP SCREW,X3,JOG PWB
		531	QYTDSF2608Z	TAP SCREW,X2,JACK PWB
		532	LP40990-001A	SPECIAL SCREW,X3,MAIN PWB
		548	QAR0266-001	FAN MOTOR
		549	QYTDSF3008M	TAP SCREW,X2,FAN
		550	LP21133-002C	BRACKET(CENTER)
		552	LP40990-001A	SPECIAL SCREW,X2,BKT(CTR)
	⚠	555	LP21134-007A	REAR COVER
		556	QYSBSG3006N	TAP SCREW,X2,R.COVER
		559	LP40990-001A	SPECIAL SCREW,X4,REG PWB
		561	QYTDSF3008M	TAP SCREW,X6,JACK
	⚠	564	QMP4A10-170	POWER CORD,EX
	⚠	564	QMP51K0-170-K	POWER CORD,EK
		566	QYTDSF2608Z	TAP SCREW,X5,FRONT PWB
		568	LP40990-001A	SPECIAL SCREW,X2,DIGI PWB
		570	LP31180-001B	BRACKET(HDD),X2
		571	LP40990-001A	SPECIAL SCREW,X4,BKT(HDD)
		572	QAL0459-001	LPH30542-009B
		573	LP40738-001A	SCREW,X4,HDD
		574	LP31206-001A	S.PLATE(WIND)
		575	LP40990-001A	SPECIAL SCREW,S.PLT(WIND
		576	LP41067-001B	SHEET(SHIELD),FOR HDD
		577	LP41065-001A	STUD,X2,DIGI PWB
		578	QYSPSPD3005Z	SCREW,X2,JAPAN ONLY
		579	QYSPSPD3005Z	SCREW,X2,DIGI PWB
		580	WJY0022-001A	E-BRAIDED ASSY,WR3
		581	WJY0022-001A	E-BRAIDED ASSY,WR4
		WR1	WJT0101-001A	E-CARD WIRE,DIGI-TERM
		WR2	QUQ210-1314CC	FFC WIRE,DIGI-MAIN
		WR3	WJT0108-001A	E-CARD WIRE,FRONT-MAIN
		WR4	QJJ001-101400	SIN CR C-C WIRE,REG-DIGI
		WR5	QJJ032-042404	SIN CR C-C WIRE,REG-HDD
		WR6	QUQ212-1520CG	FFC WIRE,REG-MAIN
		WR7	QUQ112-1112CG	FFC WIRE,TERM-MAIN
		WR8	WJS0018-003A	E-FL/RB WIRE,HDD-DIGI
		WR9	QUQ212-0410CG	FFC WIRE,MAIN-SJACK

5.3 MECHANISM ASSEMBLY <M4>



Classifi-cation	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

MECHANISM ASSEMBLY <M3>

		1	LP21039-001U	M.DECK ASSY
		3	LP40097-002E	G.POLE CAP
		4	QAH0082-001	FE HEAD
		15	LP30958-001B	LOAD.GEAR BASE
		16	QYTPST2620Z	TAP SCREW,X2,L.G.BASE
		18	LP40798-001A	L.GEAR(S) ASSY
		18A	LP21040-001A	L.GEAR(S)
		18B	LP40799-001A	L.ARM(S) ASSY
		19	LP40837-001A	TOR.SPRING(S),L.GEAR(S)
		20	LP40903-002B	FIXING PLATE
		21	LP40806-001D	P.BASE ASSY(S)
		22	LP30959-002B	LOAD GEAR
		23	LP40802-001C	L.GEAR(T) ASSY
		23A	LP21041-001D	L.GEAR(T)
		23B	LP40803-001A	L.ARM(T) ASSY
		24	LP40838-001A	TOR.SPRING(T),L.GEAR(T)
		26	LP40808-001E	P.BASE ASSY(T)
		30	LP31020-004B	ARM BASE
		31	QYTDST2606Z	TAP SCREW
		36	LP21055-001F	TU LEVER
		37	LP40943-001A	TENSION SPRING
		38	LP40859-001D	T-UP HEAD
		39	LP30961-001C	LID GUIDE
		42	LP40810-001B	P.R.ARM ASSY
		44	LP40840-001D	TORSION SPRING,P.ROLLER
		46	LP30963-001B	PRESS LEVER
		47	PQM30017-24	SLIT WASHER,P.LEVER
		48	LP40930-002E	S-SWITCH,S-SW
		49	LP40813-001D	G.ARM ASSY
		50	LP40841-001A	TORSION SPRING,G.ARM
		51	LP30002-090A	SPACER,CAP MOT.
		52	QAH0081-001	AC HEAD
		53	LP30965-001A	HEAD BASE,SET220
		55	LP40842-001D	COMP.SPRING,SET210
		56	QYTDST2006M	TAP SCREW,A/C HEAD
		57	LP41036-001A	A/C ADJ.SCREW,X2,A/C HEAD
		58	QYTDST2606Z	TAP SCREW,X2,A/C HEAD
		59	QAR0023-001	LOADING MOTOR,L.MOTOR
		60	QYTPSP3003Z	SCREW,X2,L.MOTOR
		61	LP21056-002H	MOTOR BRACKET
		62	QYTPST2620Z	TAP SCREW,M.BKT
		63	LP40814-001B	WORM BEARING
		64	LP21044-001E	CONTROL CAM
		65	PQM30017-24	SLIT WASHER,CTL.CAM
		66	LP40815-001A	WORM GEAR
		67	LP40816-001B	HELICAL GEAR,M.BKT
		68	LP40817-001A	CONNECT GEAR
		69	LP10400-001J	CONTROL PLATE
		70	LP40843-001A	TOR.SPRING
		71	LP40818-001B	T.ARM ASSY
		72	LP40844-001E	TENSION SPRING,T.ARM
		73	LP21045-001D	T.ARM BASE
		74	LP40821-001A	T.BAND ASSY
		75	LP30967-001B	BAND HOLDER-1
		76	LP30968-001C	BAND HOLDER-2
		77	LP40822-002B	ADJUST PIN
		78	LP31000-005E	T.ARM LEVER
		79	LP21046-001C	MAIN BRAKE(T)
		80	LP40824-001A	BAND BRAKE ASSY
		81	LP30969-002B	BRAKE LEVER
		82	LP30003-033B	TENSION SPRING,BRK LEVER
		83	LP30003-035B	TENSION SPRING,BRK LEVER
		84	LP40825-001B	CAP.BRAKE ASSY
	⚠	85	QAR0224-002	CAPSTAN MOTOR,JVC
		86	QYTPSG2606Z	TAP SCREW,X3,CAP.MOTOR
		87	LP30005-010A	BELT
		88	LP30970-001A	IDLER ARM
		89	LP40828-004A	IDLER GEAR 1,X2
		90	LP40829-001B	IDLER GEAR 2,X2
		91	LP31014-001A	WIRE HOLDER
		93	LP40934-001B	CLUTCH UNIT
		94	PQM30017-47	SLIT WASHER,CLUT.UNIT
		95	LP30973-001A	DIRECT GEAR
		96	LP40939-001A	COMP. SPRING,DIR.GEAR
		102	LP30974-001C	CHANGE LEVER
		105	LP21049-001A	REEL DISK,X2
		107	LP30017-004A	SPACER,X2,REEL DISK
		110	LP10401-001H	SIDE FRAME(L)
		111	LP10402-001K	SIDE FRAME(R)
		112	QYTDST2606Z	TAP SCREW,X2,FOR MECHA
		113	LP40917-001D	TORSION SPRING,FOR DUMP.
		114	LP30976-001E	SIDE PLATE
		115	LP30977-002D	LIMIT PLATE
		116	LP40846-001C	LIMIT SPRING,SIDE PLATE
		117	LP31100-001B	DRIVE LEVER
		118	LP30978-001B	DRIVE ARM(L)
		119	LP30979-001P	DRIVE ARM(R)
		120	LP40847-001B	TORSION SPRING,D.ARM(R)
		121	LP30980-001E	CONNECT PLATE
		122	LP10403-001C	SIDE HOLDER(L)
		123	LP10404-001E	SIDE HOLDER(R)
		124	LP30983-001B	LOCK LEVER(L)
		125	LP30984-001B	LOCK LEVER(R)
		126	LP40924-001D	TENSION SPRING,X2,L.LEVER
		127	LP40972-001A	EARTH SPRING(1)
		128	LP40857-001B	EARTH SPRING(2),TOP FRAME
		130	LP30981-001G	C.HOLDER ASSY
		134	LP21051-002C	R.SAFETY LEVER
		137	LP21052-001J	TOP FRAME
		151	LP30985-001G	DOOR OPENER,S.FRM(R)
		161	LP40993-001A	TAPE GUIDE
		WR1	WJT0059-001D	E-CARD WIRE,CAP MOTOR
		WR2	WJT0067-001B	E-CARD WIRE,A/C HEAD
		WR3	WJS0022-001A	E-FL/RB WIRE,L.MOTOR

5.4 ELECTRICAL PARTS LIST

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
**********				
			SW.REG BOARD ASSEMBLY <01>	
		PW1	LPA10184-02A	SW REG BOARD ASSY
		IC5101	STR-G6551	IC,PRI.REG IC
		IC5301	L5431-T	IC,FB
		IC5301	or MM1431AT-T	IC,FB
		IC5301	or UTCTL431-T	IC,FB
		IC5303	PQ5EV3	IC,AL2.5V
		IC5305	L5431-T	IC,AL3.3V
		IC5305	or MM1431AT-T	IC,AL3.3V
		IC5305	or UTCTL431-T	IC,AL3.3V
		Q5303	2SC5739/QP/	TRANSISTOR,AL3.3V
		Q5307	2SC5739/QP/	TRANSISTOR,SW5V
		Q5311	2SD2144S/UV/-T	TRANSISTOR,SW12V
		Q5312	DTA114EUA-X	DIGI TRANSISTOR,SW12V
		Q5312	or UN5111-X	DIGI TRANSISTOR,SW12V
		Q5312	or RN2302-X	D TRANSISTOR,SW12V
		Q5312	or PDTA114EU-X	DIGI TRANSISTOR,SW12V
		Q5313	DTC114EUA-X	DIGI TRANSISTOR,P.CTL
		Q5313	or UN5211-X	DIGI TRANSISTOR,P.CTL
		Q5313	or RN1302-X	DIGI TRANSISTOR,P.CTL
		Q5313	or PDTC114EU-X	DIGI TRANSISTOR,P.CTL
		Q5318	2SB1068/KU/-T	TRANSISTOR
		Q5319	DTC114EUA-X	DIGI TRANSISTOR,FUN12V
		Q5319	or UN5211-X	DIGI TRANSISTOR,FUN12V
		Q5319	or RN1302-X	DIGI TRANSISTOR,FUN12V
		Q5319	or PDTC114EU-X	DIGI TRANSISTOR,FUN12V
		D5001	D3SBA60	BRIDGE DIODE,PRI.DIODE
		D5101	AU01-T2	SI DIODE
		D5101	or 10ELS4-T2	FR DIODE
		D5102	AU01Z-T2	FR DIODE,START CIR.
		D5102	or ERA18-02-T2	FR DIODE,START CIR.
		D5102	or 1SR153-400-T2	FR DIODE,START CIR.
		D5102	or 10ELS2-T2	FR DIODE,START CIR.
		D5102	or PG104RS-T2	FR DIODE,START CIR.
		D5103	AU01-T2	SI DIODE
		D5103	or 10ELS4-T2	FR DIODE
		D5104	1SS133-T2	SI DIODE
		D5104	or 1SS270A-T2	SI DIODE
		D5202	SB640FCT	SB DIODE,4V
		D5202	or FSQ05A04B	SB DIODE,4V
		D5202	or YG801C04	SB DIODE,4V
		D5202	or SF5SC4	SB DIODE,4V
		D5202	or FMB-24	SB DIODE,4V
		D5203	FMX-12S	FR DIODE,6V UNREG
		D5203	or FCF06A20	FR DIODE,6V UNREG
		D5203	or YG901C2	FR DIODE,6V UNREG
		D5203	or SF5LC20U	FR DIODE,6V UNREG
		D5203	or ER602FCT	FR DIODE,6V UNREG
		D5204	SB640FCT	SB DIODE,6V
		D5204	or FSQ05A04B	SB DIODE,6V
		D5204	or YG801C04	SB DIODE,6V
		D5204	or SF5SC4	SB DIODE,6V
		D5204	or FMB-24	SB DIODE,6V
		D5208	PG104RS-T2	FR DIODE,-10V
		D5208	or ERA18-02-T2	FR DIODE,-10V
		D5208	or 10ELS2-T2	FR DIODE,-10V
		D5209	PG104RS-T2	FR DIODE,45V
		D5209	or ERA18-02-T2	FR DIODE,45V
		D5209	or 10ELS2-T2	FR DIODE,45V
		D5212	RL2Z-LFB2	FRD,12V
		D5301	MTZJ15C-T2	Z DIODE,12V PROT.
		D5301	or RD15ES/B3/-T2	Z DIODE,12V PROT.
		D5320	MTZJ5.6C-T2	Z DIODE,SW5V
		D5320	or RD5.6ES/B3/-T2	Z DIODE,SW5V
		D5324	MTZJ12A-T2	Z DIODE,SW12V
		D5324	or RD12ES/B1/-T2	Z DIODE,SW12V
		D5328	MTZJ7.5A-T2	Z DIODE,AUDIO(-)
		D5328	or RD7.5ES/B1/-T2	Z DIODE,AUDIO(-)
		D5330	11ES2-T2	SI DIODE,AL5V HDD
		D5330	or ERA15-02-T2	SI DIODE,AL5V HDD
		D5330	or 1A3G-T2	SI DIODE,AL5V HDD
		D5331	AW04-T2	SB DIODE,3.3V OP
		D5331	or 11EQS04-T2	SB DIODE,3.3V OP
		D5331	or 1S4-T2	SB DIODE,3.3V OP
		R5101	QRG02GJ-683	OMF RESISTOR 68kΩ,2W J
		R5102	QRE141J-330Y	C RESISTOR 33Ω,1/4W J
		R5103	NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W J
		R5104	QRE141J-681Y	C RESISTOR 680Ω,1/4W J
		R5105	QRT01DJ-R39X	MF RESISTOR 0.39Ω,1W J
		R5106	QRG02GJ-683	OMF RESISTOR 68kΩ,2W J
		R5303	NRVA02D-133X	CMF RESISTOR 13kΩ,1/10W D
		R5304	NRVA02D-123X	CMF RESISTOR 12kΩ,1/10W D
		R5307	NRSA02J-181X	MG RESISTOR 180Ω,1/10W J
		R5311	NRSA02J-221X	MG RESISTOR 220Ω,1/10W J
		R5312	NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W J
		R5313	NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W J
		R5318	NRSA02J-221X	MG RESISTOR 220Ω,1/10W J
		R5319	NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W J
		R5320	NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W J
		R5321	NRVA02D-562X	CMF RESISTOR 5.6kΩ,1/10W D
		R5322	NRVA02D-392X	CMF RESISTOR 3.9kΩ,1/10W D
		R5327	NRVA02D-683X	CMF RESISTOR 68kΩ,1/10W D
		R5332	QRE141J-103Y	C RESISTOR 10kΩ,1/4W J
		R5333	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W J
		R5334	NRSA02J-122X	MG RESISTOR 1.2kΩ,1/10W J
		R5344	QRL01DJ-101X	OMF RESISTOR 100Ω,1W J
		R5345	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W J
		R5346	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W J
		R5349	QRL02DJ-101X	OMF RESISTOR 100Ω,2W J
	⚠	C5001	QFZ9077-683	F CAPACITOR 0.068μF
	⚠	C5002	QFZ9051-223	F CAPACITOR 0.022μF
		C5003	QEZ0374-826	E CAPACITOR 82μF,400V
	⚠	C5004	QCZ9071-222	C CAPACITOR 0.0022μF,400V
		C5101	QCZ0136-101Z	C CAPACITOR 100pF,1kV
		C5102	QEMX1VM-276Z	E CAPACITOR 27μF,35V M
		C5103	QCZ0136-471Z	C CAPACITOR 470pF,1kV
		C5104	QFLC1HJ-471Z	F CAPACITOR 470pF,50V J
		C5106	QCZ0212-472	C CAPACITOR 0.0047μF,1kV K
		C5107	NCB21HK-223X	C CAPACITOR 0.022μF,50V K
		C5203	QEMT1AM-128	E CAPACITOR 1200μF,10V M
		C5204	QETN1AM-108Z	E CAPACITOR 1000μF,10V M
		C5205	QECP1AM-158	E CAPACITOR 1500μF,10V M
		C5206	QEMT1CM-687	E CAPACITOR 680μF,16V M
		C5208	QETJ2AM-475Z	E CAPACITOR 4.7μF,100V M
		C5209	QETN1CM-107Z	E CAPACITOR 100μF,16V M
		C5301	QETN1AM-107Z	E CAPACITOR 100μF,10V M
		C5302	QETN1AM-107Z	E CAPACITOR 100μF,10V M
		C5303	QETN1CM-107Z	E CAPACITOR 100μF,16V M
		C5304	QETN1AM-107Z	E CAPACITOR 100μF,10V M

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C5306	QFVF1HJ-154Z	F CAPACITOR	0.15µF,50V	J
		C5307	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V	J
		C5311	QETN1AM-107Z	E CAPACITOR	100µF,10V	M
		C5315	NCB21HK-102X	C CAPACITOR	0.001µF,50V	K
		C5316	QETN1AM-107Z	E CAPACITOR	100µF,10V	M
		C5320	QETN1AM-107Z	E CAPACITOR	100µF,10V	M
		C5321	QEKJ1HM-225Z	E CAPACITOR	2.2µF,50V	M
		C5322	QEKJ1CM-107Z	E CAPACITOR	100µF,16V	M
		C5331	QETN1CM-477Z	E CAPACITOR	470µF,16V	M
		L5201	PELN1184	CHOKE COIL	33µH	
		L5202	PELN1184	CHOKE COIL	33µH	
		L5203	QQR1169-001	CHOKE COIL		
		L5204	PELN1184	CHOKE COIL	33µH	
	⚠	T5001	QQS0179-001	SW TRANSF		
	⚠	LF5002	QQR1031-001	LINE FILTER,LOW FRQ.		
	⚠	PC5101	PC123F2	IC(PHOTO COUPLE)		
		K5101	QQR0678-001Z	FERRITE BEADS,IC5101		
		K5102	QQR0678-001Z	FERRITE BEADS		
		CP5301	QUY153-050Y	IM BUS WIRE,SHORT		
	⚠	F5001	QMF51E2-2R0J1	FUSE	T2.0A,AC250V	
		FC5001	QNG0006-001Z	FUSE CLIP		
		FC5002	QNG0006-001Z	FUSE CLIP		
		B5310	QUY153-050Y	IM BUS WIRE,M12V OP		
		B5311	NRSA02J-0R0X	MG RESISTOR,SW5V OP	0Ω,1/10W	J
		B5312	NRSA02J-0R0X	MG RESISTOR,FAN12V OP	0Ω,1/10W	J
		B5314	NRSA02J-0R0X	MG RESISTOR,C5331 OP	0Ω,1/10W	J
	⚠	CN5001	QGA7901C3-02	W TO B CONNE,POWER CORD		
		CN5301	QGF1207C1-15	FPC CONNE,1-15		
		CN5303	QGA2501C1-04	W TO B CONNE,TO HDD		
		CN5304	QGA2001C1-02	W TO B CONNE,TO FAN		
		CN5305	QGA2001C1-10	W TO B CONNE,TO HDD DIG		
		OT1	QYTDST3010Z	TAP SCREW,FOR IC5101		
		OT2	QYTDST3008Z	TAP SCREW,X2,D5202		
		OT3	QYTDST3008Z	TAP SCREW,FOR IC5303		
		OT4	QZW0021-001	PC SUPPORT		
		HS1	QZW0106-001	HEAT SINK,FOR IC5101		
		HS2	LP40515-001B	HEAT SINK,D5202		
		HS3	QZW0105-001	HEAT SINK,FOR IC5303		

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MAIN BOARD ASSEMBLY <03>

PW1 MAIN BOARD ASS'Y<03> includes the parts shown in the following.
PW1 3D D/2M BOARD ASS'Y<05>
PW1 DEMOD BOARD ASS'Y<14>

PW1	LPA10178-02C	MAIN BOARD ASSY,EX
PW1	LPA10178-03C	MAIN BOARD ASSY,EK
IC1	JCP8051-MSA	IC,VIDEO
IC201	LC74776-9791	IC
IC501	JCP8018	IC
IC501 or	JCP8028	IC
IC501 or	JCP8028-01	IC
IC501 or	JCP8038	IC
IC502	VC2076DP	IC
IC2201	AN3651FBP	IC
IC2601	BA15218F-XE	IC
IC2603	BU4052BCF-X	IC
IC2604	BA15218F-XE	IC
IC2605	BU4052BCF-X	IC,FOR DV
IC2606	BU4052BCF-X	IC
IC2607	BA15218F-XE	IC
IC2608	BU4052BCF-X	IC
IC2609	BU4052BCF-X	IC
IC2610	BA15218F-XE	IC
IC3001	HD6432194SAD54F	IC(MCU),MAIN CPU
IC3001 or	HD64F2194CFD54	IC(MCU),MAIN CPU,EX
IC3002	IC-PST3427U-X	IC,RESET
IC3003	*(REFER TO BELOW)	IC,EEPROM(16K)
IC3601	BU2090FS-X	IC,EXP1
IC3651	BU2090FS-X	IC,EXP2
IC7001	PT6959-X	IC
IC7002	GP1U291Q	IR DETECT UNIT
IC7002 or	PNA4652M00YC	IR DETECT UNIT
IC7002 or	PIC-37143LJ	IR DETECT UNIT
Q7	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)
Q7 or	2PC4081/R/-X	TRANSISTOR
Q8	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)
Q8 or	2PC4081/R/-X	TRANSISTOR
Q9	2SA1576A/QR/-X	TRANSISTOR,RF EQ(S)
Q9 or	2PA1576/R/-X	TRANSISTOR
Q10	2SA1576A/QR/-X	TRANSISTOR,FSC BUF
Q10 or	2PA1576/R/-X	TRANSISTOR
Q16	DTC144WUA-X	DIGI TRANSISTOR,DEMP(SP/EP)
Q16 or	UN521E-X	DIGI TRANSISTOR
Q16 or	RN1309-X	DIGI TRANSISTOR
Q16 or	PDTC144WU-X	DIGI TRANSISTOR
Q21	2SA1576A/QR/-X	TRANSISTOR,PB C BUF
Q21 or	2PA1576/R/-X	TRANSISTOR
Q24	2SA1576A/QR/-X	TRANSISTOR,2FSC BUF
Q24 or	2PA1576/R/-X	TRANSISTOR
Q38	2SC4081/QRS/-X	TRANSISTOR,Y BDL
Q38 or	2PC4081/R/-X	TRANSISTOR
Q41	DTC144WUA-X	DIGI TRANSISTOR,MESECAM
Q41 or	UN521E-X	DIGI TRANSISTOR
Q41 or	RN1309-X	DIGI TRANSISTOR
Q41 or	PDTC144WU-X	DIGI TRANSISTOR
Q50	DTC144WUA-X	DIGI TRANSISTOR,EE(L)
Q50 or	UN521E-X	DIGI TRANSISTOR
Q50 or	RN1309-X	DIGI TRANSISTOR
Q50 or	PDTC144WU-X	DIGI TRANSISTOR
Q401	2SA1576A/QR/-X	TRANSISTOR
Q402	2SA1576A/QR/-X	TRANSISTOR
Q403	DTC144WUA-X	DIGI TRANSISTOR
Q403 or	PDTC144WU-X	DIGI TRANSISTOR
Q403 or	UN521E-X	DIGI TRANSISTOR
Q403 or	RN1309-X	DIGI TRANSISTOR
Q405	2SA1576A/QR/-X	TRANSISTOR
Q2001	2SC4081/QRS/-X	TRANSISTOR
Q2001 or	2SD1819A/QRS/-X	TRANSISTOR
Q2001 or	2PC4081/R/-X	TRANSISTOR
Q2002	2SC4081/QRS/-X	TRANSISTOR
Q2002 or	2SD1819A/QRS/-X	TRANSISTOR
Q2002 or	2PC4081/R/-X	TRANSISTOR
Q2003	DTA144WUA-X	DIGI TRANSISTOR
Q2003 or	PDTA144WU-X	DIGI TRANSISTOR
Q2003 or	UN511E-X	DIGI TRANSISTOR
Q2003 or	RN2309-X	D TRANSISTOR
Q2051	2SC4081/QRS/-X	TRANSISTOR

* HM-HDS4EK : LPN0821-001A-02
HM-HDS4EX : LPN0820-001A-01

The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
The method of setting the VCR to the user RCU mode is written on the service manual.

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		Q2051	or 2SD1819A/QRS/-X	TRANSISTOR
		Q2051	or 2PC4081/R/-X	TRANSISTOR
		Q2052	2SA1576A/QR/-X	TRANSISTOR
		Q2052	or 2SB1218A/QR/-X	TRANSISTOR
		Q2052	or 2PA1576/R/-X	TRANSISTOR
		Q2053	DTC144WUA-X	DIGI TRANSISTOR
		Q2053	or PDTC144WU-X	DIGI TRANSISTOR
		Q2053	or UN521E-X	DIGI TRANSISTOR
		Q2053	or RN1309-X	DIGI TRANSISTOR
		Q2054	2SA1576A/QR/-X	TRANSISTOR
		Q2054	or 2SB1218A/QR/-X	TRANSISTOR
		Q2054	or 2PA1576/R/-X	TRANSISTOR
		Q2055	DTC144WUA-X	DIGI TRANSISTOR
		Q2055	or PDTC144WU-X	DIGI TRANSISTOR
		Q2055	or UN521E-X	DIGI TRANSISTOR
		Q2055	or RN1309-X	DIGI TRANSISTOR
		Q2201	DTA144WUA-X	DIGI TRANSISTOR
		Q2201	or PDTA144WU-X	DIGI TRANSISTOR
		Q2201	or UN511E-X	DIGI TRANSISTOR
		Q2201	or RN2309-X	D TRANSISTOR
		Q2202	DTC144WUA-X	DIGI TRANSISTOR
		Q2202	or PDTC144WU-X	DIGI TRANSISTOR
		Q2202	or UN521E-X	DIGI TRANSISTOR
		Q2202	or RN1309-X	DIGI TRANSISTOR
		Q2203	2SC4081/QRS/-X	TRANSISTOR
		Q2203	or 2PC4081/R/-X	TRANSISTOR
		Q2203	or 2SD1819A/QRS/-X	TRANSISTOR
		Q2204	2SC4081/QRS/-X	TRANSISTOR
		Q2204	or 2PC4081/R/-X	TRANSISTOR
		Q2204	or 2SD1819A/QRS/-X	TRANSISTOR
		Q2251	DTC144WUA-X	DIGI TRANSISTOR
		Q2251	or PDTC144WU-X	DIGI TRANSISTOR
		Q2251	or UN521E-X	DIGI TRANSISTOR
		Q2251	or RN1309-X	DIGI TRANSISTOR
		Q2252	DTC144WUA-X	DIGI TRANSISTOR
		Q2252	or PDTC144WU-X	DIGI TRANSISTOR
		Q2252	or UN521E-X	DIGI TRANSISTOR
		Q2252	or RN1309-X	DIGI TRANSISTOR
		Q2253	DTC144WUA-X	DIGI TRANSISTOR
		Q2253	or PDTC144WU-X	DIGI TRANSISTOR
		Q2253	or UN521E-X	DIGI TRANSISTOR
		Q2253	or RN1309-X	DIGI TRANSISTOR
		Q2254	DTC114EUA-X	DIGI TRANSISTOR
		Q2254	or PDTC114EU-X	DIGI TRANSISTOR
		Q2254	or UN5211-X	DIGI TRANSISTOR
		Q2254	or RN1302-X	DIGI TRANSISTOR
		Q2255	DTC114EUA-X	DIGI TRANSISTOR,SECAM_PB,EX
		Q2255	or PDTC114EU-X	DIGI TRANSISTOR,SECAM_PB,EX
		Q2255	or UN5211-X	DIGI TRANSISTOR,SECAM_PB,EX
		Q2255	or RN1302-X	DIGI TRANSISTOR,SECAM_PB,EX
		Q2601	DTC114EUA-X	DIGI TRANSISTOR,MUTE
		Q2602	DTC114EUA-X	DIGI TRANSISTOR,MUTE
		Q3002	PTZ-NV16A	IC(PHOTO SENSOR,STA.SENSOR
		Q3003	PTZ-NV16A	IC(PHOTO SENSOR,END SENSOR
		Q3004	2SD1819A/QRS/-X	TRANSISTOR,POWER DET
		Q3004	or 2SC4081/QRS/-X	TRANSISTOR,POWER DET
		Q3004	or 2PC4081/R/-X	TRANSISTOR,POWER DET
		Q3005	2SD1819A/QRS/-X	TRANSISTOR,SVCC
		Q3005	or 2SC4081/QRS/-X	TRANSISTOR,SVCC
		Q3005	or 2PC4081/R/-X	TRANSISTOR,SVCC
		Q3007	DTC144WUA-X	DIGI TRANSISTOR,P50
		Q3007	or UN521E-X	DIGI TRANSISTOR,P50
		Q3007	or PDTC144WU-X	DIGI TRANSISTOR,P50
		Q3007	or RN1309-X	DIGI TRANSISTOR,P50
		Q3011	2SK1580-X	MOS FET,K.BUS_D.IN
		Q3012	DTC144WUA-X	DIGI TRANSISTOR,DIGI_RESET
		Q3012	or UN521E-X	DIGI TRANSISTOR,DIGI_RESET
		Q3012	or PDTC144WU-X	DIGI TRANSISTOR,DIGI_RESET
		Q3012	or RN1309-X	DIGI TRANSISTOR,DIGI_RESET
		Q3013	DTC144WUA-X	DIGI TRANSISTOR,H.SYNC_DET
		Q3013	or UN521E-X	DIGI TRANSISTOR,H.SYNC_DET
		Q3013	or PDTC144WU-X	DIGI TRANSISTOR,H.SYNC_DET
		Q3013	or RN1309-X	DIGI TRANSISTOR,H.SYNC_DET
		Q3901	DTC144WUA-X	DIGI TRANSISTOR,JIG
		Q3901	or UN521E-X	DIGI TRANSISTOR,JIG
		Q3901	or PDTC144WU-X	DIGI TRANSISTOR,JIG
		Q3901	or RN1309-X	DIGI TRANSISTOR,JIG
		Q4001	UN5211-X	DIGI TRANSISTOR
		Q4001	or DTC114EUA-X	DIGI TRANSISTOR
		Q4001	or RN1302-X	DIGI TRANSISTOR
		Q5403	2SD1450/ST/-T	TRANSISTOR,CH+12V
		Q5403	or 2SD1302/ST/-T	TRANSISTOR,CH+12V
		Q5404	2SD2144S/UV/-T	TRANSISTOR,RF5V
		Q6030	2SB1218A/QR/-X	TRANSISTOR,V BUFF
		Q6030	or 2SA1576A/QR/-X	TRANSISTOR
		Q6030	or 2PA1576/R/-X	TRANSISTOR
		Q6031	DTC114EUA-X	DIGI TRANSISTOR,V MUTE
		Q6031	or UN5211-X	DIGI TRANSISTOR,V MUTE
		Q6031	or RN1302-X	DIGI TRANSISTOR,V MUTE
		Q6031	or PDTC114EU-X	DIGI TRANSISTOR,V MUTE
		Q6032	DTC114EUA-X	DIGI TRANSISTOR,A MUTE
		Q6032	or UN5211-X	DIGI TRANSISTOR,A MUTE
		Q6032	or RN1302-X	DIGI TRANSISTOR,A MUTE
		Q6032	or PDTC114EU-X	DIGI TRANSISTOR,A MUTE
		Q7001	DTB143TK-X	CHIP DEGI.TR.
		Q7002	DTB143TK-X	CHIP DEGI.TR.
		Q7003	DTB143TK-X	CHIP DEGI.TR.
		Q7004	DTB143TK-X	CHIP DEGI.TR.
		Q7005	DTB143TK-X	CHIP DEGI.TR.
		Q7006	DTB143TK-X	CHIP DEGI.TR.
		Q7007	DTB143EK-X	CHIP DEGI.TR.
		Q7008	DTC143TUA-X	DIGI TRANSISTOR
		Q7008	or UN5216-X	D TRANSISTOR
		Q7009	DTC143TUA-X	DIGI TRANSISTOR
		Q7009	or UN5216-X	D TRANSISTOR
		Q7010	DTC143TUA-X	DIGI TRANSISTOR
		Q7010	or UN5216-X	D TRANSISTOR
		Q7011	DTC143TUA-X	DIGI TRANSISTOR
		Q7011	or UN5216-X	D TRANSISTOR
		Q7012	DTC143TUA-X	DIGI TRANSISTOR
		Q7012	or UN5216-X	D TRANSISTOR
		Q7013	DTC143TUA-X	DIGI TRANSISTOR
		Q7013	or UN5216-X	D TRANSISTOR
		Q7014	DTC143TUA-X	DIGI TRANSISTOR
		Q7014	or UN5216-X	D TRANSISTOR
		Q7015	2SC4081/QRS/-X	TRANSISTOR
		Q7016	DTC144EUA-X	DIGI TRANSISTOR
		Q7502	2SC1317/RS/-T	TRANSISTOR,SAT_CTL
		D1	1SS133-T2	SI DIODE,ESD
		D2	1SS133-T2	SI DIODE,ESD
		D202	QRE141J-152Y	C RESISTOR,OSD CS 1.5kΩ,1/4W J
		D203	QRE141J-101Y	C RESISTOR,S.CLK 100Ω,1/4W J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		D204	QRE141J-101Y	C RESISTOR,S.DATA	100Ω,1/4W	J
		D2251	1SS133-T2	SI DIODE		
		D3001	LNB2301L01VI	IR LED,LED		
		D3002	1SS133-T2	SI DIODE,PROTECT		
		D3002	or 1SS270A-T2	SI DIODE,PROTECT		
		D3003	RD39ES/B3/-T2	Z DIODE,POWER DET		
		D3003	or MTZJ39C-T2	Z DIODE,POWER DET		
		D3004	11ES2-T2	SI DIODE,BU5V		
		D3004	or 1A3G-T2	SI DIODE,BU5V		
		D3005	11ES2-T2	SI DIODE,AL5V		
		D3005	or 1A3G-T2	SI DIODE,AL5V		
		D3008	1SS355-X	SI DIODE,P50		
		D4001	NRSA02J-0R0X	MG RESISTOR,SHORT	0Ω,1/10W	J
		D4001	or NRSA02J-0R0C	MG RESISTOR,SHORT	0Ω,1/10W	J
		D4002	1SS355-X	SI DIODE		
		D5402	MTZJ11C-T2	Z DIODE,CH+12V		
		D5402	or RD11ES/B3/-T2	Z DIODE,CH+12V		
		D6002	HZ30-2L-T2	Z.DIODE		
		D6002	or HZ30-2LTD	Z DIODE (M)		
		D7061	SLR-325MC-T	LED,S-VHS		
		D7064	SLR-325VC-T	LED,VHS-REC		
		R1	NRSA02J-622X	MG RESISTOR	6.2kΩ,1/10W	J
		R2	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W	J
		R3	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W	J
		R5	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R6	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W	J
		R7	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R10	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R25	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R26	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R27	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R28	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R29	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R31	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W	J
		R32	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R35	NDC21HJ-470X	C CAPACITOR	47pF,50V	J
		R36	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W	J
		R38	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W	J
		R40	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R41	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W	J
		R42	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R46	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R48	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R51	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W	J
		R52	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R76	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R77	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W	J
		R84	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R88	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R90	NRSA02J-391X	MG RESISTOR	390Ω,1/10W	J
		R92	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R93	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R104	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R118	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R206	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R207	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R211	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R212	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R213	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R216	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R217	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R218	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R219	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R220	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W	J
		R221	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W	J
		R401	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R402	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R403	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R404	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R405	NRSA02J-683X	MG RESISTOR	68kΩ,1/10W	J
		R406	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W	J
		R407	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R408	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R503	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R504	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R505	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W	J
		R506	NRSA02J-391X	MG RESISTOR	390Ω,1/10W	J
		R507	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W	J
		R508	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R509	NRSA02J-162X	MG RESISTOR	1.6kΩ,1/10W	J
		R510	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W	D
		R511	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W	D
		R512	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W	D
		R513	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10W	D
		R514	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W	D
		R515	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W	D
		R516	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R517	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R525	NRSA02J-125X	MG RESISTOR	1.2MΩ,1/10W	J
		R531	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R532	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R533	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R534	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R535	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R536	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R543	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
		R544	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2003	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2004	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R2005	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R2007	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R2008	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R2010	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R2013	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2014	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W	J
		R2015	NRSA02J-181X	MG RESISTOR	180Ω,1/10W	J
		R2016	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2017	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2021	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W	J
		R2041	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R2053	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2054	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W	J
		R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W	J
		R2056	QRE141J-820Y	C RESISTOR	82Ω,1/4W	J
		R2057	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2058	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R2059	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2060	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R2201	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2202	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R2203	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2204	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2205	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2206	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2207	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2208	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2209	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R2210	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2211	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R2212	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R2213	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2214	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R2215	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R2218	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R2219	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W	J
		R2220	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2222	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2223	NRSA02J-511X	MG RESISTOR	510Ω,1/10W	J
		R2224	NRSA02J-511X	MG RESISTOR	510Ω,1/10W	J
		R2225	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2226	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2227	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2228	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2229	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2230	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2231	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2232	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2233	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R2234	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2235	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R2236	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R2237	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R2238	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R2251	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R2252	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R2253	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2254	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R2255	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W	J
		R2256	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R2601	NRSA02J-683X	MG RESISTOR	68kΩ,1/10W	J
		R2602	NRSA02J-683X	MG RESISTOR	68kΩ,1/10W	J
		R2603	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R2604	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R2605	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W	J
		R2606	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W	J
		R2607	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W	J
		R2608	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W	J
		R2609	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2610	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2611	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R2612	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R2613	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2614	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2623	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2630	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2631	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2632	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2636	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R2637	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R2638	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R2639	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2642	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2644	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2645	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2646	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2653	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R2662	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2663	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R2664	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2665	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2666	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2667	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2668	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2669	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2670	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2671	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2672	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2673	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R2674	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R2675	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R2676	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R2677	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R2678	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R3011	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3012	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3018	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3021	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3022	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3025	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3026	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3027	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3029	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3030	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3031	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3032	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3033	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3034	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3035	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3036	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3037	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3038	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W	J
		R3040	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3041	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3042	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3044	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3046	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3047	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3048	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R3049	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3050	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3051	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3052	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3053	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3054	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3055	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3056	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3057	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3058	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3059	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3060	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3061	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3062	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R3063	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3066	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3069	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R3071	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3072	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3073	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3075	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3076	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3078	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3079	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R3080	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3083	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3087	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3088	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3089	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3091	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3092	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3094	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3095	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3096	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3097	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3103	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3104	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3105	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R3106	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3108	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3109	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3110	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3113	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W	J
		R3205	QRE141J-181Y	C RESISTOR	180Ω,1/4W	J
		R3206	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W	J
		R3207	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R3208	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R3209	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R3210	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R3211	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W	J
		R3212	NRSA02J-474X	MG RESISTOR	470kΩ,1/10W	J
		R3213	NRSA02J-334X	MG RESISTOR	330kΩ,1/10W	J
		R3214	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3215	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3216	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3217	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3218	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3219	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3220	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W	J
		R3222	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3225	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3229	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W	J
		R3230	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R3231	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R3234	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3235	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R3236	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R3237	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3238	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3239	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3241	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W	J
		R3252	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R3253	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R3261	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3262	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3263	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3601	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3602	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3603	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3604	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3605	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3606	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3607	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3608	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R3651	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3652	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3653	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3654	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R3655	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R4001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R4003	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R4004	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R4005	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W	J
		R4007	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R4008	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R4009	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R4010	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R4012	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W	J
		R4013	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R4015	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W	J
		R4017	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R5403	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R5404	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R6020	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R6021	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R6030	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R6031	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R6032	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R6033	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W	J
		R6060	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R6061	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R6080	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R6553	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R6554	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R7001	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R7002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R7003	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R7005	NRSA02J-513X	MG RESISTOR	51kΩ,1/10W	J
		R7011	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R7021	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W	J
		R7022	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W	J
		R7041	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7042	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7043	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7044	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R7045	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7046	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7047	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R7049	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R7051	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R7052	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R7053	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R7054	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R7055	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION		
R7061	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
R7064	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
R7191	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
R7192	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
R7505	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
R7506	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
R7507	QRE121J-100Y	C RESISTOR	10Ω,1/2W	J
VR2251	QVP0039-223Z	TRIM RESISTOR		
B5	NRSA02J-0R0X	MG RESISTOR,PB FM BUF	0Ω,1/10W	J
B12	NRSA02J-0R0X	MG RESISTOR,C.SYNC(D)	0Ω,1/10W	J
B201	NRSA02J-0R0X	MG RESISTOR,OSD OUT	0Ω,1/10W	J
B202	NRSA02J-0R0X	MG RESISTOR,PAL/DOM	0Ω,1/10W	J
B204	NRSA02J-0R0X	MG RESISTOR,PAL/DOM	0Ω,1/10W	J
B206	NRSA02J-0R0X	MG RESISTOR,PAL/MS	0Ω,1/10W	J
B207	NRSA02J-0R0X	MG RESISTOR,PAL/MS	0Ω,1/10W	J
B540	NRSA02J-0R0X	MG RESISTOR,V OUT	0Ω,1/10W	J
B2051	QUY153-050Y	IM BUS WIRE		
B2603	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
B2604	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
B3022	NRSA02J-0R0X	MG RESISTOR,SAT_CTL	0Ω,1/10W	J
B3023	NRSA02J-0R0X	MG RESISTOR,PAL_PB	0Ω,1/10W	J
B3962	NRSA02J-0R0X	MG RESISTOR,JIG	0Ω,1/10W	J
B3966	NRSA02J-0R0X	MG RESISTOR,JIG	0Ω,1/10W	J
B3971	NRSA02J-0R0X	MG RESISTOR,JIG	0Ω,1/10W	J
B5403	QUY153-050Y	IM BUS WIRE		
B6001	NRSA02J-0R0X	MG RESISTOR,AFC	0Ω,1/10W	J
B6032	NRSA02J-0R0X	MG RESISTOR,TU V MUTE	0Ω,1/10W	J
B7504	NRSA02J-0R0X	MG RESISTOR,PAL SHORT	0Ω,1/10W	J
B7505	NRSA02J-0R0X	MG RESISTOR,PAL SHORT	0Ω,1/10W	J
C1	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
C2	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
C3	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
C4	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
C5	QEKC0JM-476Z	E CAPACITOR	47μF,6.3V	M
C6	QDYB1CM-103Y	C CAPACITOR	0.01μF,16V	M
C7	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
C8	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C9	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
C10	NDC21HJ-151X	C CAPACITOR	150pF,50V	J
C11	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C12	NDC21HJ-8R0X	C CAPACITOR	8pF,50V	J
C14	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C15	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C16	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C17	QEKJ1HM-335Z	E CAPACITOR	3.3μF,50V	M
C19	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
C20	QEPF1HM-105Z	BP E CAPACITOR	1μF,50V	M
C21	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C22	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
C23	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C24	QCBB1HK-104Y	C CAPACITOR	0.1μF,50V	K
C25	NDC21HJ-6R0X	C CAPACITOR	6pF,50V	J
C26	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C27	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
C28	QEKJ1HM-335Z	E CAPACITOR	3.3μF,50V	M
C29	NCB21EK-333X	C CAPACITOR	0.033μF,25V	K
C30	NCB21CK-474X	C CAPACITOR	0.47μF,16V	K
C31	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
C32	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C33	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
C34	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION		
C35	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C36	QEKJ1HM-475Z	E CAPACITOR	4.7μF,50V	M
C37	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
C38	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
C39	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C40	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
C53	NDC21HJ-101X	C CAPACITOR	100pF,50V	J
C59	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C60	QERF0JM-476Z	E CAPACITOR	47μF,6.3V	M
C61	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C63	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C64	NDC21HJ-220X	C CAPACITOR	22pF,50V	J
C65	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
C69	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
C70	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
C72	NDC21HJ-470X	C CAPACITOR	47pF,50V	J
C73	NDC21HJ-120X	C CAPACITOR	12pF,50V	J
C80	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C84	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
C92	NDC21HJ-330X	C CAPACITOR	33pF,50V	J
C103	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C106	NCB21HK-821X	C CAPACITOR	820pF,50V	K
C108	NDC21HJ-680X	C CAPACITOR	68pF,50V	J
C110	NDC21HJ-820X	C CAPACITOR	82pF,50V	J
C114	NDC21HJ-181X	C CAPACITOR	180pF,50V	J
C202	NCB21CK-105X	C CAPACITOR	1μF,16V	K
C204	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
C206	NDC21HJ-560X	C CAPACITOR	56pF,50V	J
C207	NCB21CK-474X	C CAPACITOR	0.47μF,16V	K
C209	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V	M
C211	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C212	NDC21HJ-330X	C CAPACITOR	33pF,50V	J
C213	NDC21HJ-330X	C CAPACITOR	33pF,50V	J
C215	NDC21HJ-101X	C CAPACITOR	100pF,50V	J
C216	NDC21HJ-101X	C CAPACITOR	100pF,50V	J
C217	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C218	QEKJ1HM-475Z	E CAPACITOR	4.7μF,50V	M
C219	NCB21CK-224X	C CAPACITOR	0.22μF,16V	K
C220	NCB21CK-224X	C CAPACITOR	0.22μF,16V	K
C222	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V	M
C401	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C402	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
C403	NDC21HJ-131X	C CAPACITOR	130pF,50V	J
C404	NDC21HJ-470X	C CAPACITOR	47pF,50V	J
C406	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
C407	NDC21HJ-150X	C CAPACITOR	15pF,50V	J
C501	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
C502	QEKJ1EM-475Z	E CAPACITOR	4.7μF,25V	M
C503	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
C504	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
C505	QEKJ1EM-475Z	E CAPACITOR	4.7μF,25V	M
C506	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C507	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
C508	QEKJ1HM-474Z	E CAPACITOR	0.47μF,50V	M
C509	QEKJ1CM-106Z	E CAPACITOR	10μF,16V	M
C510	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
C511	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C512	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C513	QEKJ1EM-475Z	E CAPACITOR	4.7μF,25V	M
C514	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
C515	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C516	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C518	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C519	QEKJ1HM-225Z	E CAPACITOR	2.2µF,50V	M
		C520	QERF1EM-475Z	E CAPACITOR	4.7µF,25V	M
		C521	QEKJ1EM-475Z	E CAPACITOR	4.7µF,25V	M
		C522	QEKJ1HM-225Z	E CAPACITOR	2.2µF,50V	M
		C523	QEKJ1HM-225Z	E CAPACITOR	2.2µF,50V	M
		C524	NDC21HG-301X	C CAPACITOR	300pF,50V	G
		C525	NDC21HG-301X	C CAPACITOR	300pF,50V	G
		C526	NDC21HJ-101X	C CAPACITOR	100pF,50V	J
		C527	NDC21HJ-181X	C CAPACITOR	180pF,50V	J
		C528	NDC21HG-271X	C CAPACITOR	270pF,50V	G
		C529	NDC21HG-820X	C CAPACITOR	82pF,50V	G
		C530	NDC21HG-221X	C CAPACITOR	220pF,50V	G
		C531	NDC21HG-301X	C CAPACITOR	300pF,50V	G
		C532	NDC21HG-301X	C CAPACITOR	300pF,50V	G
		C533	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C534	QETJ0JM-477Z	E CAPACITOR	470µF,6.3V	M
		C535	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C551	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C553	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C554	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C556	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C557	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C559	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C560	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C561	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C2001	QETJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2002	QEKJ1HM-105Z	E CAPACITOR	1µF,50V	M
		C2003	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V	M
		C2005	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2006	NCB21HK-123X	C CAPACITOR	0.012µF,50V	K
		C2007	QEKJ1CM-226Z	E CAPACITOR	22µF,16V	M
		C2008	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2009	NCB21HK-102X	C CAPACITOR	0.001µF,50V	K
		C2010	NCB21HK-152X	C CAPACITOR	0.0015µF,50V	K
		C2011	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2012	QEKC1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2051	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C2053	NCB21HK-472X	C CAPACITOR	0.0047µF,50V	K
		C2054	NCB21HK-223X	C CAPACITOR	0.022µF,50V	K
		C2055	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2061	QFV61HJ-823Z	F CAPACITOR	0.082µF,50V	J
		C2201	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2202	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2203	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V	M
		C2204	QEKJ0JM-336Z	E CAPACITOR	33µF,6.3V	M
		C2205	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2206	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2207	NCB21HK-153X	C CAPACITOR	0.015µF,50V	K
		C2208	NCB21HK-153X	C CAPACITOR	0.015µF,50V	K
		C2209	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2210	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2211	QEKJ0JM-336Z	E CAPACITOR	33µF,6.3V	M
		C2212	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V	M
		C2213	NCB21HK-104X	C CAPACITOR	0.1µF,50V	K
		C2214	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2215	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2216	QEKJ1CM-476Z	E CAPACITOR	47µF,16V	M
		C2217	NCB21HK-104X	C CAPACITOR	0.1µF,50V	K
		C2220	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C2221	NCB21HK-223X	C CAPACITOR	0.022µF,50V	K
		C2222	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2223	NCB21HK-473X	C CAPACITOR	0.047µF,50V	K
		C2224	NCB21HK-473X	C CAPACITOR	0.047µF,50V	K
		C2225	NCB21AK-105X	C CAPACITOR	1µF,10V	K
		C2226	NCB21AK-105X	C CAPACITOR	1µF,10V	K
		C2227	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2230	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2231	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2251	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2252	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2253	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2254	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V	M
		C2255	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2256	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2257	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C2258	NDC21HJ-181X	C CAPACITOR,EX	180pF,50V	J
		C2259	QEKJ1HM-334Z	E CAPACITOR	0.33µF,50V	M
		C2605	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2606	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2607	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2608	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2609	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2610	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2611	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2612	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2613	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2614	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2615	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2616	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C2617	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C3004	NCB21EK-473X	C CAPACITOR	0.047µF,25V	K
		C3010	QEZ0244-229	EDL CAPACITOR	0.0022F	
		C3011	QETL0JM-338	E CAPACITOR	3300µF,6.3V	M
		C3012	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V	M
		C3015	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3016	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3019	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		C3022	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3024	NDC21HJ-220X	C CAPACITOR,EX	22pF,50V	J
		C3024	NDC21HJ-160X	C CAPACITOR,EK	16pF,50V	J
		C3025	QAT3725-300Z	TRIM CAPACITOR,EX		
		C3027	QERF1CM-106Z	E CAPACITOR	10µF,16V	M
		C3030	QERF1CM-476Z	E CAPACITOR	47µF,16V	M
		C3031	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3032	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3033	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3036	NDC21HJ-180X	C CAPACITOR	18pF,50V	J
		C3037	NDC21HJ-120X	C CAPACITOR	12pF,50V	J
		C3040	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C3041	NDC21HJ-100X	C CAPACITOR,EK	10pF,50V	J
		C3042	QETJ0JM-477Z	E CAPACITOR	470µF,6.3V	M
		C3054	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3071	QEKJ1HM-336Z	E CAPACITOR	33µF,50V	M
		C3602	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C3652	NCB21EK-104X	C CAPACITOR	0.1µF,25V	K
		C4002	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C4004	QERF1CM-226Z	E CAPACITOR	22µF,16V	M
		C4005	NCB21HK-222X	C CAPACITOR	0.0022µF,50V	K
		C4006	QERF0JM-476Z	E CAPACITOR	47µF,6.3V	M
		C4008	NCB21AK-105X	C CAPACITOR	1µF,10V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C4009	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		C4010	NCB21EK-223X	C CAPACITOR	0.022μF,25V	K
		C4011	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
		C4012	NCB21EK-224X	C CAPACITOR	0.22μF,25V	K
		C4014	NDC21HJ-101X	C CAPACITOR	100pF,50V	J
		C4015	NDC21HJ-102X	C CAPACITOR	0.001μF,50V	J
		C4018	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C5401	QEKC1CM-476Z	E CAPACITOR	47μF,16V	M
		C5402	QEKC1CM-107Z	E CAPACITOR	100μF,16V	M
		C5403	QEKJ1CM-476Z	E CAPACITOR	47μF,16V	M
		C5404	QEKJ1CM-107Z	E CAPACITOR	100μF,16V	M
		C6014	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C6032	NCB21EK-473X	C CAPACITOR	0.047μF,25V	K
		C6033	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		C6037	QEKJ1CM-106Z	E CAPACITOR	10μF,16V	M
		C6553	QEKJ0JM-337Z	E CAPACITOR	330μF,6.3V	M
		C7001	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
		C7002	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V	M
		C7011	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C7192	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C7194	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C7502	QETJ0JM-477Z	E CAPACITOR	470μF,6.3V	M
		L1	QQL29BJ-100Z	P COIL	10μH	
		L2	QQL071J-121Y	INDUCTOR	120μH	
		L3	QQL29BJ-100Z	P COIL	10μH	
		L4	QQL29BJ-100Z	P COIL	10μH	
		L5	QQR0521-012Z	NOISE FILTER		
		L12	QQR0967-001	CHOKE COIL		
		L13	QQL071J-330Y	INDUCTOR	33μH	
		L15	QQL29BJ-100Z	P COIL	10μH	
		L18	QQL071J-220Y	INDUCTOR	22μH	
		L19	QQL071J-120Y	INDUCTOR	12μH	
		L20	QUY153-050Y	IM BUS WIRE		
		L22	QQL231J-1R0Y	INDUCTOR	1μH	
		L24	QQL071J-270Y	INDUCTOR	27μH	
		L27	QQL071J-330Y	INDUCTOR	33μH	
		L28	QQL071J-680Y	INDUCTOR	68μH	
		L201	QQL29BK-1R0Z	P COIL	1μH	
		L202	QUY153-050Y	IM BUS WIRE		
		L203	QQL071J-220Y	INDUCTOR	22μH	
		L204	QQL29BJ-100Z	P COIL	10μH	
		L205	QUY153-050Y	IM BUS WIRE		
		L206	QQL37CJ-220Z	INDUCTOR	22μH	
		L401	QQL071J-150Y	INDUCTOR	15μH	
		L402	QUY153-050Y	IM BUS WIRE		
		L501	QQL29BJ-100Z	P COIL	10μH	
		L503	QQL29BJ-100Z	P COIL	10μH	
		L504	QQL01BJ-101Z	P COIL	100μH	
		L2001	QUY153-050Y	IM BUS WIRE		
		L2201	QUY153-050Y	IM BUS WIRE		
		L2251	QQL29BJ-100Z	P COIL	10μH	
		L2252	QQL29BJ-151Z	P COIL,EX	15μH	
		L4001	QUY153-050Y	IM BUS WIRE		
		L6001	QUY153-050Y	IM BUS WIRE		
		L6002	QUY153-050Y	IM BUS WIRE		
		L6005	QQL29BJ-3R3Z	P COIL	3.3μH	
		L6032	QUY153-050Y	IM BUS WIRE		
		L6501	QQL29BJ-3R3Z	P COIL	3.3μH	
		L7001	QQL231J-R22Y	INDUCTOR	0.22μH	
		L7191	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
		L7192	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
		L7193	QUY153-050Y	IM BUS WIRE		
		L7194	QUY153-050Y	IM BUS WIRE		
		L7501	QQL29BJ-101Z	P COIL	10μH	
		X1	QAX0576-001Z	CRYSTAL,PAL		
		X3001	QAX0444-001	CRYSTAL,ADJ (32K),EK		
		X3001	QAX0445-001	CRYSTAL,ADJ (32K),EX		
		X3002	QAX0527-001	CRYSTAL,10M		
		J7001	QNN0381-002	PIN JACK,FRONT_IN		
		JS3001	QSW0954-002	ROTARY ENCODER		
		T2051	PELN0832	OSC TRANS		
		K2001	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2003	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2004	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2251	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2252	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		K2253	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		PC3001	RPI-304J	IC(PHOTO SENSOR),SP REEL		
		PC3002	RPI-304J	IC(PHOTO SENSOR),TU REEL		
	⚠	CP3002	ICP-N15-T	C PROTECTOR,M12/17/26V		
	⚠	CP3004	ICP-N20-T	C PROTECTOR,AL5.8V		
	⚠	CP4002	ICP-N15-T	C PROTECTOR		
		TU6001	QAU0261-002	TUNER		
		DI7001	LTG-0126M-03J	LED		
		S3001	QSW0602-004	PUSH SWITCH,REC SAFE		
		S3002	QSW0602-004	PUSH SWITCH,S.CASS SW		
		S7001	QSW0456-002Z	TACT SWITCH,POWER		
		S7016	QSW0456-002Z	TACT SWITCH,EJECT		
		S7021	QSW0456-002Z	TACT SWITCH,HDD/VCR		
		CN1	QGF1201C2-11	FPC CONNE,DRUM 1-11		
		CN701	LPA10162-02C	2D DIGI PWB AY,2D-DIG		
		CN2001	QGF1207C1-06	FPC CONNE,A/C HEAD		
		CN2002	QGB2532J1-02	B TO B CONNE,FE HEAD		
		CN3001	QGB2032M4-12	B TO B CONNE,CAP+DRUM_M		
		CN3011	QGF1208F1-10	FPC CONNE,FRONT		
		CN3901	QGF1207C1-06	FPC CONNE,JIG		
		CN6701	LPA10094-13A	DEMOD PWB ASSY,DEMOD		
		CN7003	QGF1207C1-04	FPC CONNE,S-JACK		
		CN7501	QGB2024K1-09S	B TO B CONNE,TERM 1-9		
		CN7502	QGB2024K1-09S	B TO B CONNE,TERM 1-9		
		CN7503	QGB2024K1-09S	B TO B CONNE,TERM 1-9		
		CN7504	QGB2024K1-09S	B TO B CONNE,TERM 1-9		
		CN7505	QGB2024K1-07S	B TO B CONNE,TERM 1-7		
		CN7507	QGF1207C1-11	FPC CONNE,TERM 1-11		
		CN7509	QGF1207C1-15	FPC CONNE,REG.1-15		
		CN7511	QGF1016C3-13	FFC/FPC CONNE,DIGI.1-13		
		SD1	LP31179-001A	S.PLATE(P/R)		
		OT1	LP31158-001A	BOSS(MECHA) 1,MECHA-MAIN		
		OT2	LP31185-001A	BOSS(MECHA) 2,X2,MECHA-MAIN		

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2D DIGITAL BOARD ASSEMBLY <05>

PW1	LPA10162-02C	2D DIGITAL BOARD ASSY
IC1201	JCP8036	IC
IC1201 or	JCP8057	IC
Q1201	2SC1317/RS/-T	TRANSISTOR
Q1202	2SA1576A/QR/-X	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		Q1202	or 2PA1576/R/-X	TRANSISTOR		
		Q1203	2SA1576A/QR/-X	TRANSISTOR		
		Q1203	or 2PA1576/R/-X	TRANSISTOR		
		Q1204	2SC4081/QRS/-X	TRANSISTOR		
		Q1204	or 2PC4081/R/-X	TRANSISTOR		
		Q1205	2SC4081/S/-X	TRANSISTOR		
		D1201	RD4.3ES/B3/-T2	Z DIODE		
		R1201	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R1202	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R1203	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R1204	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R1205	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R1206	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R1207	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W	J
		R1208	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W	J
		R1209	NRSA02J-180X	MG RESISTOR	18Ω,1/10W	J
		R1210	NRVA02D-393X	CMF RESISTOR	39kΩ,1/10W	D
		R1211	NRVA02D-153X	CMF RESISTOR	15kΩ,1/10W	D
		R1212	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R1213	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
		R1214	NRSA02J-121X	MG RESISTOR	120Ω,1/10W	J
		R1215	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R1216	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
		R1217	NRVA02D-101X	CMF RESISTOR	100Ω,1/10W	D
		R1218	NRVA02D-301X	CMF RESISTOR	300Ω,1/10W	D
		R1220	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R1222	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R1224	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		VR1201	QUY153-050Y	IM BUS WIRE		
		C1201	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C1208	NDC21HJ-221X	C CAPACITOR	220pF,50V	J
		C1210	NDC21HJ-330X	C CAPACITOR	33pF,50V	J
		C1211	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C1212	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C1213	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1214	NCF21CZ-105X	C CAPACITOR	1μF,16V	Z
		C1215	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C1216	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1217	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1218	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1219	NCF21CZ-105X	C CAPACITOR	1μF,16V	Z
		C1220	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C1222	NDC21HJ-820X	C CAPACITOR	82pF,50V	J
		C1223	NDC21HJ-270X	C CAPACITOR	27pF,50V	J
		C1225	NDC21HJ-820X	C CAPACITOR	82pF,50V	J
		C1226	NDC21HJ-270X	C CAPACITOR	27pF,50V	J
		C1227	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
		C1228	QEKJ1EM-475Z	E CAPACITOR	4.7μF,25V	M
		C1229	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C1230	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1231	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1232	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1233	QDYB1CM-103Y	C CAPACITOR	0.01μF,16V	M
		C1234	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1235	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C1236	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1237	NCF21EZ-104X	C CAPACITOR	0.1μF,25V	Z
		C1238	NDC21HJ-180X	C CAPACITOR	18pF,50V	J
		C1239	NDC21HJ-560X	C CAPACITOR	56pF,50V	J
		C1243	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C1244	QEKJ1EM-475Z	E CAPACITOR	4.7μF,25V	M
		C1245	NDC21HJ-150X	C CAPACITOR	15pF,50V	J
		C1246	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		L1201	QQL071J-1R0Y	INDUCTOR	1μH	
		L1202	QRE141J-181Y	C RESISTOR	180Ω,1/4W	J
		L1203	QQL29BJ-331Z	P COIL	330μH	
		L1204	QQL29BJ-221Z	P COIL	220μH	
		L1205	QQL071J-6R8Y	INDUCTOR	6.8μH	
		L1206	QQL071J-6R8Y	INDUCTOR	6.8μH	
		L1207	QQL29BJ-221Z	P COIL	220μH	
		L1208	QQL071J-150Y	INDUCTOR	15μH	
		LC1201	QQL29BJ-101Z	P COIL	100μH	
		CN1201	QGG2502K1-12	HEADER PIN		
		SD1	LP31098-001B	SHIELD CASE(DEG)		
		BK1	LP40425-001A	BRACKET(PWB)		

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TERMINAL BOARD ASSEMBLY <06>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PW1	LPA10182-01B	TERMINAL BOARD ASSY
		IC701	JCP8038	IC
		IC703	MM1233XF-X	IC,OUTSEL_C
		IC703	or NJM2285M-XE	IC,OUTSEL_C
		IC704	MM1503XN-X	IC
		IC705	MM1501XN-X	IC
		IC901	BH7636S	IC,CH+
		Q701	2SA1576A/QR/-X	TRANSISTOR
		Q701	or 2SB1218A/QR/-X	TRANSISTOR
		Q701	or 2PA1576/R/-X	TRANSISTOR
		Q702	DTA144WUA-X	DIGI TRANSISTOR
		Q702	or UN511E-X	DIGI TRANSISTOR
		Q702	or RN2309-X	D TRANSISTOR
		Q702	or PDTA144WU-X	DIGI TRANSISTOR
		Q901	2SB1218A/QR/-X	TRANSISTOR
		Q901	or 2SA1576A/QR/-X	TRANSISTOR
		Q901	or 2PA1576/R/-X	TRANSISTOR
		Q903	2SB1218A/QR/-X	TRANSISTOR
		Q903	or 2SA1576A/QR/-X	TRANSISTOR
		Q903	or 2PA1576/R/-X	TRANSISTOR
		Q904	2SB1218A/QR/-X	TRANSISTOR
		Q904	or 2SA1576A/QR/-X	TRANSISTOR
		Q904	or 2PA1576/R/-X	TRANSISTOR
		Q905	2SB1218A/QR/-X	TRANSISTOR
		Q905	or 2SA1576A/QR/-X	TRANSISTOR
		Q905	or 2PA1576/R/-X	TRANSISTOR
		Q906	2SD1819A/QRS/-X	TRANSISTOR
		Q906	or 2SC4081/QRS/-X	TRANSISTOR
		Q906	or 2PC4081/R/-X	TRANSISTOR
		Q907	2SD1819A/QRS/-X	TRANSISTOR
		Q907	or 2SC4081/QRS/-X	TRANSISTOR
		Q907	or 2PC4081/R/-X	TRANSISTOR
		Q908	2SD1819A/QRS/-X	TRANSISTOR
		Q908	or 2SC4081/QRS/-X	TRANSISTOR
		Q908	or 2PC4081/R/-X	TRANSISTOR
		Q909	2SD1819A/QRS/-X	TRANSISTOR
		Q909	or 2SC4081/QRS/-X	TRANSISTOR
		Q909	or 2PC4081/R/-X	TRANSISTOR
		Q910	2SB1218A/QR/-X	TRANSISTOR
		Q910	or 2SA1576A/QR/-X	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		Q910	or 2PA1576/R/-X	TRANSISTOR		
		Q911	UN5211-X	DIGI TRANSISTOR		
		Q911	or DTC114EUA-X	DIGI TRANSISTOR		
		Q911	or RN1302-X	DIGI TRANSISTOR		
		Q911	or PDTC114EU-X	DIGI TRANSISTOR		
		Q912	2SB1218A/QR/-X	TRANSISTOR		
		Q912	or 2SA1576A/QR/-X	TRANSISTOR		
		Q912	or 2PA1576/R/-X	TRANSISTOR		
		Q913	2SB1218A/QR/-X	TRANSISTOR		
		Q913	or 2SA1576A/QR/-X	TRANSISTOR		
		Q913	or 2PA1576/R/-X	TRANSISTOR		
		R704	NRSA02J-221X	MG RESISTOR	220Ω,1/10W	J
		R705	NRSA02J-681X	MG RESISTOR	680Ω,1/10W	J
		R706	NRSA02J-331X	MG RESISTOR	330Ω,1/10W	J
		R708	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R709	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R710	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R711	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R712	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R713	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R714	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R715	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R716	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R721	NRSA02J-151X	MG RESISTOR	150Ω,1/10W	J
		R722	NRSA02J-271X	MG RESISTOR	270Ω,1/10W	J
		R901	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R902	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R903	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R904	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R905	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R906	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R907	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R908	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R909	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R910	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R911	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R912	NRSA02J-680X	MG RESISTOR	68Ω,1/10W	J
		R913	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R914	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R915	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R916	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R917	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R918	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W	J
		R919	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R920	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R921	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R922	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R923	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R924	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R925	NRSA02J-471X	MG RESISTOR	470Ω,1/10W	J
		R926	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
		R927	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R928	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R929	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R930	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
		R931	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
		R932	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		R933	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R934	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
		R935	NRSA02J-561X	MG RESISTOR	560Ω,1/10W	J
		R936	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R937	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		R938	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W	J
		R939	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W	J
		R940	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W	J
		R941	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
		R942	QRE121J-331Y	C RESISTOR	330Ω,1/2W	J
		R943	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R944	NRSA02J-101X	MG RESISTOR	100Ω,1/10W	J
		R945	QRE121J-391Y	C RESISTOR	390Ω,1/2W	J
		R946	QRE121J-391Y	C RESISTOR	390Ω,1/2W	J
		R947	NRSA02J-680X	MG RESISTOR	68Ω,1/10W	J
		R948	NRSA02J-750X	MG RESISTOR	75Ω,1/10W	J
		R949	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
		R950	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W	J
		C701	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
		C703	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C704	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
		C706	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C707	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
		C709	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C710	QEKJ1HM-105Z	E CAPACITOR	1μF,50V	M
		C712	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C713	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C714	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
		C715	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
		C716	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C717	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C718	QEKJ1HM-474Z	E CAPACITOR	0.47μF,50V	M
		C719	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C720	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C721	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C722	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C723	QEKJ1HM-475Z	E CAPACITOR	4.7μF,50V	M
		C724	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C725	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C726	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C727	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C728	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
		C729	NCB21HK-104X	C CAPACITOR	0.1μF,50V	K
		C730	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
		C731	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C732	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C733	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C740	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C741	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C742	QEKJ1HM-474Z	E CAPACITOR	0.47μF,50V	M
		C756	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C757	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C760	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C761	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C764	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C765	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C767	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C768	QEKJ1CM-476Z	E CAPACITOR	47μF,16V	M
		C770	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C771	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C772	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C773	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C774	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C775	QEKJ1EM-106Z	E CAPACITOR	10μF,25V	M
		C901	NCB21HK-331X	C CAPACITOR	330pF,50V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C902	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C903	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C904	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C905	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C906	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C907	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C908	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C909	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C910	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C911	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C912	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C913	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C914	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C915	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C916	NCB21HK-471X	C CAPACITOR	470pF,50V	K
		C921	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C922	NCB21HK-331X	C CAPACITOR	330pF,50V	K
		C925	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C926	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C929	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C930	NCB21HK-102X	C CAPACITOR	0.001μF,50V	K
		C931	QEKJ1CM-107Z	E CAPACITOR	100μF,16V	M
		C934	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
		C935	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
		C937	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
		C938	NDC21HJ-330X	C CAPACITOR	33pF,50V	J
		C939	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
		C940	NCB21HK-223X	C CAPACITOR	0.022μF,50V	K
		C942	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C943	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C944	QEKJ1CM-106Z	E CAPACITOR	10μF,16V	M
		C945	QEKJ1CM-106Z	E CAPACITOR	10μF,16V	M
		C946	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C947	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V	M
		C949	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V	M
		C950	NCB21EK-104X	C CAPACITOR	0.1μF,25V	K
		C951	QEKJ1CM-476Z	E CAPACITOR	47μF,16V	M
		C952	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C953	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
		C954	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V	M
		C955	QEKJ0JM-337Z	E CAPACITOR	330μF,6.3V	M
		L701	QQL29BJ-100Z	P COIL	10μH	
		L702	QQL29BJ-100Z	P COIL	10μH	
		L704	QQL29BJ-100Z	P COIL	10μH	
		L901	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L902	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L903	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L904	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L905	QQL071J-1R0Y	INDUCTOR	1μH	
		L906	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L907	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L908	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L909	QQL071J-4R7Y	INDUCTOR	4.7μH	
		L910	QUY153-050Y	IM BUS WIRE		
		L911	QQL071J-150Y	INDUCTOR	15μH	
		L912	QQL071J-150Y	INDUCTOR	15μH	
		L913	QUY153-050Y	IM BUS WIRE		
		L916	QQL071J-1R0Y	INDUCTOR	1μH	
		L919	QUY153-050Y	IM BUS WIRE		
		J901	QNZ0627-001	21P CONNECTOR,AV2		
		J902	QNZ0627-001	21P CONNECTOR,AV1		
		J903	QNN0295-002	PIN JACK,A.OUT(L/R)		
		J905	PU60659	MINI JACK,SAT.CTL		
		J906	QND0009-001	S JACK,S OUT		
		ET1	QNZ0431-001Z	EARTH TERMINAL		
		CN701	QGF1016F5-08	FFC/FPC CONNE		
		CN702	QGB2024J1-09S	B TO B CONNE		
		CN703	QGB2024J1-09S	B TO B CONNE		
		CN704	QGB2024J1-09S	B TO B CONNE		
		CN705	QGB2024J1-09S	B TO B CONNE		
		CN901	QGF1208F1-11	FPC CONNE		
		CN903	QGB2024J1-07S	B TO B CONNE		

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A/C HEAD BOARD ASSEMBLY <12>

	PW1	LPA10158-01A1	A/C HEAD BOARD ASSY		

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DEMOD BOARD ASSEMBLY <14>

	PW1	LPA10094-13A	DEMOD BOARD ASSY		
	IC6701	MSP3417G-X	IC		
	IC6701 or	MSP3417GQGB8V3X	IC		
	IC6701 or	MSP3417D-X	IC		
	Q6701	2SC3936/BC/-X	TRANSISTOR		
	D6701	1SS133-T2	SI DIODE		
	D6701 or	1N4148M-T2	DIODE		
	R6701	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W	J
	R6702	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W	J
	R6703	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
	R6704	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
	R6705	NRSA02J-271X	MG RESISTOR	270Ω,1/10W	J
	R6707	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
	R6708	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W	J
	R6709	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
	R6710	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W	J
	R6711	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W	J
	R6712	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
	R6713	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W	J
	R6714	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W	J
	R6715	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W	J
	R6716	NRSA02J-470X	MG RESISTOR	47Ω,1/10W	J
	R6719	QRE141J-103Y	C RESISTOR	10kΩ,1/4W	J
	R6720	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W	J
	R6721	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W	J
	C6701	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
	C6704	NCB21HK-103X	C CAPACITOR	0.01μF,50V	K
	C6707	NDC21HJ-470X	C CAPACITOR	47pF,50V	J
	C6708	NDC21HJ-7R0X	C CAPACITOR	7pF,50V	J
	C6709	NDC21HJ-3R0X	C CAPACITOR	3pF,50V	J
	C6713	NCF21CZ-224X	C CAPACITOR	0.22μF,16V	Z
	C6714	NCB21HK-222X	C CAPACITOR	0.0022μF,50V	K
	C6715	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V	M
	C6716	NCB21HK-222X	C CAPACITOR	0.0022μF,50V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C6717	QEKJ1HM-225Z	E CAPACITOR	2.2µF,50V	M
		C6719	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C6720	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C6721	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		C6722	QEKJ1EM-106Z	E CAPACITOR	10µF,25V	M
		C6723	NCB21HK-103X	C CAPACITOR	0.01µF,50V	K
		L6701	QUY153-050Y	IM BUS WIRE		
		X6701	QAX0443-001	CRYSTAL		
		K6701	NQR0200-003X	FERRITE BEADS		
		K6702	NQR0200-003X	FERRITE BEADS		
		K6703	NQR0200-003X	FERRITE BEADS		
		K6704	NQR0200-003X	FERRITE BEADS		
		K6705	NQR0200-003X	FERRITE BEADS		
		K6706	NQR0200-003X	FERRITE BEADS		
		CN6701	QGG2502K1-10	HEADER PIN		
		BK1	LP40425-001A	BRACKET(PWB)		

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S JACK BOARD ASSEMBLY <29>

PW3	LPA10179-01B3	S-JACK BOARD ASSY		
R7193	QRE141J-750Y	C RESISTOR	75Ω,1/4W	J
R7194	QRE141J-750Y	C RESISTOR	75Ω,1/4W	J
C7196	QDYB1CM-103Y	C CAPACITOR	0.01µF,16V	M
J7012	QND0084-001	S JACK,FRONT_S_IN		
CN7004	QGF1208F1-04	FPC CONNE,TO MAIN		

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ADV.JOG BOARD ASSEMBLY <38>

PW2	LPA10179-01B2	ADV.JOG BOARD ASSY		
UN7001	QSW0905-001	ROTARY ENCODER		
FW7001	QUM024-08A4A4	PARA RIBON WIRE,TO FW7002		

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LED/SW BOARD ASSEMBLY <47>

PW1	LPA10179-01B1	LED/SW BOARD ASSY		
Q7061	DTC114ESA-T	DIGI TRANSISTOR,HDR-LED		
D7062	SLR-325MC-T	LED,HDD		
D7063	SLR-325VC-T	LED,HDD-REC		
D7065	SELU5E20C-T	LED,HDR LED		
D7069	QRE141J-103Y	C RESISTOR,HDR-L(10K)	10kΩ,1/4W	J
R7023	QRE141J-222Y	C RESISTOR	2.2kΩ,1/4W	J
R7024	QRE141J-272Y	C RESISTOR	2.7kΩ,1/4W	J
R7025	QRE141J-472Y	C RESISTOR	4.7kΩ,1/4W	J
R7031	QRE141J-122Y	C RESISTOR	1.2kΩ,1/4W	J
R7032	QRE141J-182Y	C RESISTOR	1.8kΩ,1/4W	J
R7033	QRE141J-222Y	C RESISTOR	2.2kΩ,1/4W	J
R7034	QRE141J-272Y	C RESISTOR	2.7kΩ,1/4W	J
R7062	QRE141J-331Y	C RESISTOR	330Ω,1/4W	J
R7063	QRE141J-331Y	C RESISTOR	330Ω,1/4W	J
R7065	QRE141J-101Y	C RESISTOR	100Ω,1/4W	J
R7066	QRE141J-103Y	C RESISTOR	10kΩ,1/4W	J
C7065	QDYB1CM-103Y	C CAPACITOR	0.01µF,16V	M

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		S7002	QSW0456-002Z	TACT SWITCH,STOP
		S7004	QSW0456-002Z	TACT SWITCH,REC-LINK
		S7006	QSW0456-002Z	TACT SWITCH,REC
		S7008	QSW0456-002Z	TACT SWITCH,PAUSE
		S7010	QSW0456-002Z	TACT SWITCH,PLAY
		S7011	QSW0456-002Z	TACT SWITCH,NAVI
		S7012	QSW0456-002Z	TACT SWITCH,ON_AIR
		S7015	QSW0456-002Z	TACT SWITCH,REMAIN
		CN7002	QGF1205F1-10	FFC/FPC CONNE,TO_MAIN

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DIGITAL BOARD ASSEMBLY <50>

PW1		LPA10180-02B	DIGITAL BOARD ASSY
IC1		JCP8053	IC
IC3		HY57641620HGTH	IC,64M
IC3	or	HY57641620HGLTH	IC,64M
IC3	or	K4S641632F-TC75	IC(DIGITAL),64M
IC4		HY57641620HGTH	IC,64M
IC4	or	HY57641620HGLTH	IC,64M
IC4	or	K4S641632F-TC75	IC(DIGITAL),64M
IC201		NDV8601VWA-BE	IC
IC202		HY57641620HGTH	IC,64M
IC202	or	HY57641620HGLTH	IC,64M
IC202	or	K4S641632F-TC75	IC(DIGITAL),64M
IC203		HY57641620HGTH	IC,64M
IC203	or	HY57641620HGLTH	IC,64M
IC203	or	K4S641632F-TC75	IC(DIGITAL),64M
IC204		39VF800A7CEK07A	IC(MICRO C ROM),FLASH ROM
IC205		SN74LV573APW-X	IC,ADD LATCH
IC206		SN74LV573APW-X	IC,ADD LATCH
IC207		SI-3018LSA-X	IC,1.8V REG
IC208		TC7WU04FU-X	IC(DIGITAL),CLK CONV
IC401		UPD61051	IC(DIGITAL)
IC402		HY57653220BTC10	IC,64M
IC402	or	K4S643232E-TC60	IC,64M
IC402	or	HY57653220BTC55	IC,64M
IC403		SN74LVC245APW-X	IC
IC403	or	TC74LCX245FT-X	IC(DIGITAL)
IC601		MM1504XN-X	IC
IC602		MM1501XN-X	IC
IC801		AK4550VT-X	IC
IC802		BA15218F-XE	IC
IC803		BA15218F-XE	IC
IC804		AK4550VT-X	IC,WITH DV
IC805		BU4052BCF-X	IC,WITH DV
IC1001		UPD72893GD	IC,DV CODEC
IC1002		UPD72852GB	IC,PHY
IC1003		K4S161622D-TC80	IC,SDRAM
IC1004		SN74AHC2G14T-X	IC,VCO
IC1006		MBV800TA70PT	IC(µ C ROM),C.SUM 6838
Q1		2SC4617/RS/-X	TRANSISTOR
Q2		2SA1774/QR/-X	TRANSISTOR
Q601		2SA1774/QR/-X	TRANSISTOR
Q602		2SC4617/QR/-X	TRANSISTOR
Q603		2SA1774/QR/-X	TRANSISTOR
Q604		2SC4617/QR/-X	TRANSISTOR
Q605		2SA1774/QR/-X	TRANSISTOR
Q606		2SC4617/QR/-X	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		Q607	2SA1774/QR/-X	TRANSISTOR		
		Q608	2SA1774/QR/-X	TRANSISTOR		
		Q1001	2SA1774/QR/-X	TRANSISTOR		
		D1	SML-010LT-X	LED		
		D201	1SS355-X	SI DIODE		
		D1001	EC2C01C-X	VARI CAP DIODE		
		D1002	EC2C01C-X	VARI CAP DIODE		
		R1	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R2	NRSA63J-150X	MG RESISTOR	15Ω,1/16W	J
		R3	NQR0129-002X	FERRITE BEADS		
		R4	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R5	NRSA63J-330X	MG RESISTOR	33Ω,1/16W	J
		R6	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W	J
		R7	NRSA63J-330X	MG RESISTOR	33Ω,1/16W	J
		R8	NRSA63J-330X	MG RESISTOR	33Ω,1/16W	J
		R9	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R10	NRSA63J-330X	MG RESISTOR	33Ω,1/16W	J
		R11	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R13	NRSA63J-330X	MG RESISTOR	33Ω,1/16W	J
		R14	NRSA63J-271X	MG RESISTOR	270Ω,1/16W	J
		R16	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R18	NRSA63D-822X	MG RESISTOR	8.2kΩ,1/16W	D
		R19	NRSA63D-183X	MG RESISTOR	18kΩ,1/16W	D
		R20	NRSA63J-101X	MG RESISTOR	100Ω,1/16W	J
		R21	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R23	NRSA63J-151X	MG RESISTOR	150Ω,1/16W	J
		R25	NQR0129-002X	FERRITE BEADS		
		R27	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W	J
		R28	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W	J
		R29	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W	J
		R30	NRSA63J-151X	MG RESISTOR	150Ω,1/16W	J
		R31	NRSA63J-151X	MG RESISTOR	150Ω,1/16W	J
		R32	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R33	NRSA63J-561X	MG RESISTOR	560Ω,1/16W	J
		R34	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W	J
		R35	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R36	NRSA63J-331X	MG RESISTOR	330Ω,1/16W	J
		R37	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R38	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W	J
		R39	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R40	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W	J
		R41	NRSA63J-151X	MG RESISTOR	150Ω,1/16W	J
		R43	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W	J
		R44	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W	J
		R45	NRSA63J-820X	MG RESISTOR	82Ω,1/16W	J
		R46	NRSA63J-820X	MG RESISTOR	82Ω,1/16W	J
		R47	NRSA63J-820X	MG RESISTOR	82Ω,1/16W	J
		R48	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R49	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R50	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R51	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R52	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R54	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R58	NRSA63J-470X	MG RESISTOR	47Ω,1/16W	J
		R201	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R204	NRSA63J-100X	MG RESISTOR	10Ω,1/16W	J
		R206	NRSA63J-220X	MG RESISTOR	22Ω,1/16W	J
		R207	NRSA63J-270X	MG RESISTOR	27Ω,1/16W	J
		R208	NRSA63D-112X	MG RESISTOR	1.1kΩ,1/16W	D
		R210	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R211	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R214	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R216	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R219	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R225	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R226	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R227	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R231	NQR0129-002X	FERRITE BEADS		
		R232	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W	J
		R233	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R246	NRSA63J-180X	MG RESISTOR	18Ω,1/16W	J
		R247	NRSA63J-100X	MG RESISTOR	10Ω,1/16W	J
		R254	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R255	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R401	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R402	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R403	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R407	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R408	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R413	NQR0129-002X	FERRITE BEADS		
		R419	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R421	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W	J
		R422	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R423	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R424	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R425	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R426	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R601	NRSA63J-331X	MG RESISTOR	330Ω,1/16W	J
		R602	NRSA63J-101X	MG RESISTOR	100Ω,1/16W	J
		R603	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R604	NRSA63J-220X	MG RESISTOR	22Ω,1/16W	J
		R605	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W	J
		R606	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W	J
		R607	NRSA63J-390X	MG RESISTOR	39Ω,1/16W	J
		R608	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W	J
		R609	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R610	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W	J
		R612	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R614	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W	J
		R615	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W	J
		R617	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R619	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W	J
		R620	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R621	NRSA63J-221X	MG RESISTOR	220Ω,1/16W	J
		R622	NRSA63J-181X	MG RESISTOR	180Ω,1/16W	J
		R801	NRSA63J-221X	MG RESISTOR	220Ω,1/16W	J
		R802	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W	J
		R803	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R805	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W	J
		R806	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R807	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R808	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R809	NRSA63J-221X	MG RESISTOR	220Ω,1/16W	J
		R810	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W	J
		R811	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R813	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W	J
		R814	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R815	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R816	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R817	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R835	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R836	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R837	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W	J
		R838	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W	J
		R839	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W	J
		R840	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W	J
		R841	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W	J
		R842	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1001	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1002	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1003	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1004	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1005	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1006	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1007	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1008	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1009	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W	J
		R1010	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1011	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1012	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1013	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1014	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1015	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1016	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1018	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1019	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1020	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1021	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1022	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1023	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1031	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1032	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1033	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1034	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1035	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1036	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W	J
		R1037	NRSA63J-912X	MG RESISTOR	9.1kΩ,1/16W	J
		R1038	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1039	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1040	NRSA63J-512X	MG RESISTOR	5.1kΩ,1/16W	J
		R1041	NRSA63J-512X	MG RESISTOR	5.1kΩ,1/16W	J
		R1042	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1043	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1044	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1045	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1046	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1047	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1048	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1049	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1050	NRSA63J-560X	MG RESISTOR	56Ω,1/16W	J
		R1051	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W	J
		R1052	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W	J
		R1053	NRSA63J-682X	MG RESISTOR	6.8kΩ,1/16W	J
		R1061	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1062	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1065	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1066	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1067	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1068	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1069	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1070	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1071	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W	J
		R1076	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		R1077	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1078	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1079	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1080	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1081	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1082	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1083	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1084	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1085	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1086	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1087	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1088	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1089	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1090	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1091	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1092	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1093	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1094	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1095	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1096	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		R1097	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W	J
		RA1	NQR0271-002X	EMI FILTER		
		RA2	NQR0271-002X	EMI FILTER		
		RA3	NQR0271-002X	EMI FILTER		
		RA4	NQR0271-002X	EMI FILTER		
		RA5	NQR0271-002X	EMI FILTER		
		RA6	NQR0271-002X	EMI FILTER		
		RA7	NQR0271-002X	EMI FILTER		
		RA8	NQR0271-002X	EMI FILTER		
		RA9	NQR0271-002X	EMI FILTER		
		RA201	NQR0271-002X	EMI FILTER		
		RA204	NRZ0040-0R0X	NET RESISTOR		
		RA205	NRZ0040-0R0X	NET RESISTOR		
		RA401	NQR0271-002X	EMI FILTER		
		RA402	NQR0271-002X	EMI FILTER		
		RA403	NRZ0040-103X	NET RESISTOR		
		RA404	NRZ0040-103X	NET RESISTOR		
		RA405	NRZ0040-472X	NET RESISTOR		
		RA410	NQR0271-002X	EMI FILTER		
		RA411	NQR0271-002X	EMI FILTER		
		RA1001	NRZ0040-0R0X	NET RESISTOR		
		RA1002	NRZ0040-0R0X	NET RESISTOR		
		RA1003	NRZ0040-0R0X	NET RESISTOR		
		RA1004	NRZ0040-0R0X	NET RESISTOR		
		RA1005	NRZ0040-0R0X	NET RESISTOR		
		RA1006	NRZ0040-0R0X	NET RESISTOR		
		C1	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C2	NCB31HK-103X	C CAPACITOR	0.01μF,50V	K
		C3	NDC31HJ-120X	C CAPACITOR	12pF,50V	J
		C5	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C7	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C8	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C9	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C10	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C11	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C12	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C13	NBE20JM-106X	TA E CAPACITOR	10μF,6.3V	M
		C14	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C15	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C16	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K
		C17	NCB31CK-104X	C CAPACITOR	0.1μF,16V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C20	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C21	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C24	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C25	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C26	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C27	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C28	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C29	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C30	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C31	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C32	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C33	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C34	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C35	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C37	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C39	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C40	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C41	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C42	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C43	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C44	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C46	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C47	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C48	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C49	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C53	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C54	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C56	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C68	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C70	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C71	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C72	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C73	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C74	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C75	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C76	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C77	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C78	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C79	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C80	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C81	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C84	NCB30JK-105X	C CAPACITOR	1µF,6.3V	K
		C85	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C86	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C89	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C90	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C91	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C93	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C94	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C95	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C201	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C202	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C203	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C204	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C205	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C206	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C207	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C208	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C209	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C210	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C211	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C212	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C213	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C214	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C215	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C216	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C217	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C218	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C219	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C220	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C221	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C223	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C224	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C225	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C226	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C227	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C228	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C229	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C233	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C234	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C235	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C236	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C237	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C238	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C240	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C241	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C242	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C243	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C244	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C245	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C246	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C247	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C248	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C250	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C251	NDC31HJ-100X	C CAPACITOR	10pF,50V	J
		C252	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C253	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C256	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C257	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C258	NEA70JM-107X	E CAPACITOR	100µF,6.3V	M
		C259	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C264	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C272	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C273	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C274	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C275	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C276	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C277	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C278	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C280	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C281	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C282	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C283	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C284	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C401	NBE20GM-107X	TA E CAPACITOR	100µF,4.0V	M
		C402	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C403	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C404	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C405	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C406	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C407	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C408	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION		
C409	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C410	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C411	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C412	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C413	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C414	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C415	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C416	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C417	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C418	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C419	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C420	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C421	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C422	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C423	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C424	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C425	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C426	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C427	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C428	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C429	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C430	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C431	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C433	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C434	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C435	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C436	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C437	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C438	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C439	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C440	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C441	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C443	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C444	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C447	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
C601	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C602	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C603	NEA70JM-107X	E CAPACITOR	100µF,6.3V	M
C604	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C605	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C606	NEA71CM-107X	E CAPACITOR	100µF,16V	M
C607	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C608	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C609	NEA70JM-107X	E CAPACITOR	100µF,6.3V	M
C610	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C611	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C612	NEA70JM-107X	E CAPACITOR	100µF,6.3V	M
C613	NDC31HJ-470X	C CAPACITOR	47pF,50V	J
C614	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C615	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C617	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C618	NCB20JM-475X	C CAPACITOR	4.7µF,6.3V	M
C619	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C621	NDC31HJ-8R0X	C CAPACITOR	8pF,50V	J
C622	NDC31HJ-8R0X	C CAPACITOR	8pF,50V	J
C623	NDC31HJ-220X	C CAPACITOR	22pF,50V	J
C624	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C625	NCB30JK-105X	C CAPACITOR	1µF,6.3V	K
C626	NCB30JK-105X	C CAPACITOR	1µF,6.3V	K
C627	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C629	NDC31HJ-8R0X	C CAPACITOR	8pF,50V	J

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION		
C630	NDC31HJ-8R0X	C CAPACITOR	8pF,50V	J
C632	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C633	NDC31HJ-151X	C CAPACITOR	150pF,50V	J
C634	NDC31HJ-151X	C CAPACITOR	150pF,50V	J
C637	NCB20JM-475X	C CAPACITOR	4.7µF,6.3V	M
C638	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C639	NDC31HJ-101X	C CAPACITOR	100pF,50V	J
C640	NDC31HJ-101X	C CAPACITOR	100pF,50V	J
C804	NCB31HK-682X	C CAPACITOR	0.0068µF,50V	K
C805	NCB31HK-332X	C CAPACITOR	0.0033µF,50V	K
C808	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C809	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C810	NEA71CM-476X	E CAPACITOR	47µF,16V	M
C814	NCB31HK-682X	C CAPACITOR	0.0068µF,50V	K
C816	NCB31HK-332X	C CAPACITOR	0.0033µF,50V	K
C818	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C819	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C820	NEA71CM-476X	E CAPACITOR	47µF,16V	M
C821	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C822	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C825	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
C826	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C829	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C830	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C831	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C832	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C833	NEA71HM-105X	E CAPACITOR	1µF,50V	M
C834	NEA71HM-105X	E CAPACITOR	1µF,50V	M
C835	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
C836	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C837	NDC31HJ-151X	C CAPACITOR	150pF,50V	J
C838	NDC31HJ-151X	C CAPACITOR	150pF,50V	J
C839	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1001	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
C1002	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
C1003	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1004	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1005	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1006	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1007	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1008	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1009	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1010	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C1011	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C1012	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1013	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1014	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C1015	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1016	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1017	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1018	NDC31HJ-120X	C CAPACITOR	12pF,50V	J
C1019	NDC31HJ-120X	C CAPACITOR	12pF,50V	J
C1020	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
C1021	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1022	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1023	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
C1024	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C1025	NCB30JK-105X	C CAPACITOR	1µF,6.3V	K
C1026	NDC31HJ-271X	C CAPACITOR	270pF,50V	J
C1027	NCB31HK-103X	C CAPACITOR	0.01µF,50V	K
C1028	NCB30JK-105X	C CAPACITOR	1µF,6.3V	K

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION		
		C1029	NDC31HJ-271X	C CAPACITOR	270pF,50V	J
		C1030	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C1031	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1032	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1033	NBE20JM-226X	TA E CAPACITOR	22µF,6.3V	M
		C1034	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1035	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1036	NCB31HK-102X	C CAPACITOR	0.001µF,50V	K
		C1037	NCB31HK-102X	C CAPACITOR	0.001µF,50V	K
		C1038	NDC31HJ-560X	C CAPACITOR	56pF,50V	J
		C1041	NBE20JM-106X	TA E CAPACITOR	10µF,6.3V	M
		C1042	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1043	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1044	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1045	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1046	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1047	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1048	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1049	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		C1050	NCB31CK-104X	C CAPACITOR	0.1µF,16V	K
		L602	NQL085J-150X	INDUCTOR	15µH	
		L604	NQL085J-150X	INDUCTOR	15µH	
		L1001	NQR0337-001X	CHOKE COIL		
		L1002	NQL024J-100X	P COIL	10µH	
		L1003	NQL024J-3R3X	P COIL	3.3µH	
		J1001	QNZ0097-001	D CONNECTOR		
		WR1	QUB221-10A4XL	SIN TWIST WIRE		
		WR2	QUB220-14A4XL	SIN TWIST WIRE		
		X1	NAX0580-001X	CXO,27M		
		X1001	NAX0509-001X	CRYSTAL		
		K1	NQR0339-001X	FERRITE BEADS		
		K2	NQR0339-001X	FERRITE BEADS		
		K3	NQR0339-001X	FERRITE BEADS		
		K5	NQR0129-002X	FERRITE BEADS		
		K6	NRSA63J-220X	MG RESISTOR	22Ω,1/16W	J
		K7	NQR0129-002X	FERRITE BEADS		
		K201	NQR0339-001X	FERRITE BEADS		
		K202	NQR0129-002X	FERRITE BEADS		
		K204	NQR0339-001X	FERRITE BEADS		
		K401	NQR0339-001X	FERRITE BEADS		
		K402	NQR0339-001X	FERRITE BEADS		
		K601	NQR0129-002X	FERRITE BEADS,SW5V		
		K602	NQR0129-002X	FERRITE BEADS,AUDIO(-)		
		K603	NQR0339-001X	FERRITE BEADS,AL3.3V		
		K604	NQR0339-001X	FERRITE BEADS,AL3.3V		
		K605	NQR0339-001X	FERRITE BEADS,AL2.5V		
		K606	NQR0339-001X	FERRITE BEADS,AL2.5V		
		K801	NQR0129-002X	FERRITE BEADS		
		K802	NQR0129-002X	FERRITE BEADS		
		K1001	NQR0339-001X	FERRITE BEADS		
		K1002	NQR0339-001X	FERRITE BEADS		
		K1003	NQR0339-001X	FERRITE BEADS		
		K1004	NQR0339-001X	FERRITE BEADS		
		K1005	NQR0339-001X	FERRITE BEADS		
		K1006	NQR0339-001X	FERRITE BEADS		
		K1007	NQR0339-001X	FERRITE BEADS		
		K1008	NQR0129-002X	FERRITE BEADS		
		K1009	NQR0339-001X	FERRITE BEADS		
		CN1	QGA2523F1-40	W TO B CONNE,HDD		
		CN201	QGB0807M2-A0T	B TO B CONNE		
		CN202	QGF1016C2-06W	FFC/FPC CONNE		
		CN601	QGA2001F2-10V	W TO B CONNE,REG		
		CN602	QGF1016C2-13W	FFC/FPC CONNE,VHS		
		CN603	QGF1016C2-08W	FFC/FPC CONNE,1-8		
		ET1	QNZ0136-001Z	EARTH TERMINAL,X3		

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LOADING MOTOR BOARD ASSEMBLY <55>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PW2	LPA10158-01A2	LOADING MOTOR BOARD ASSY